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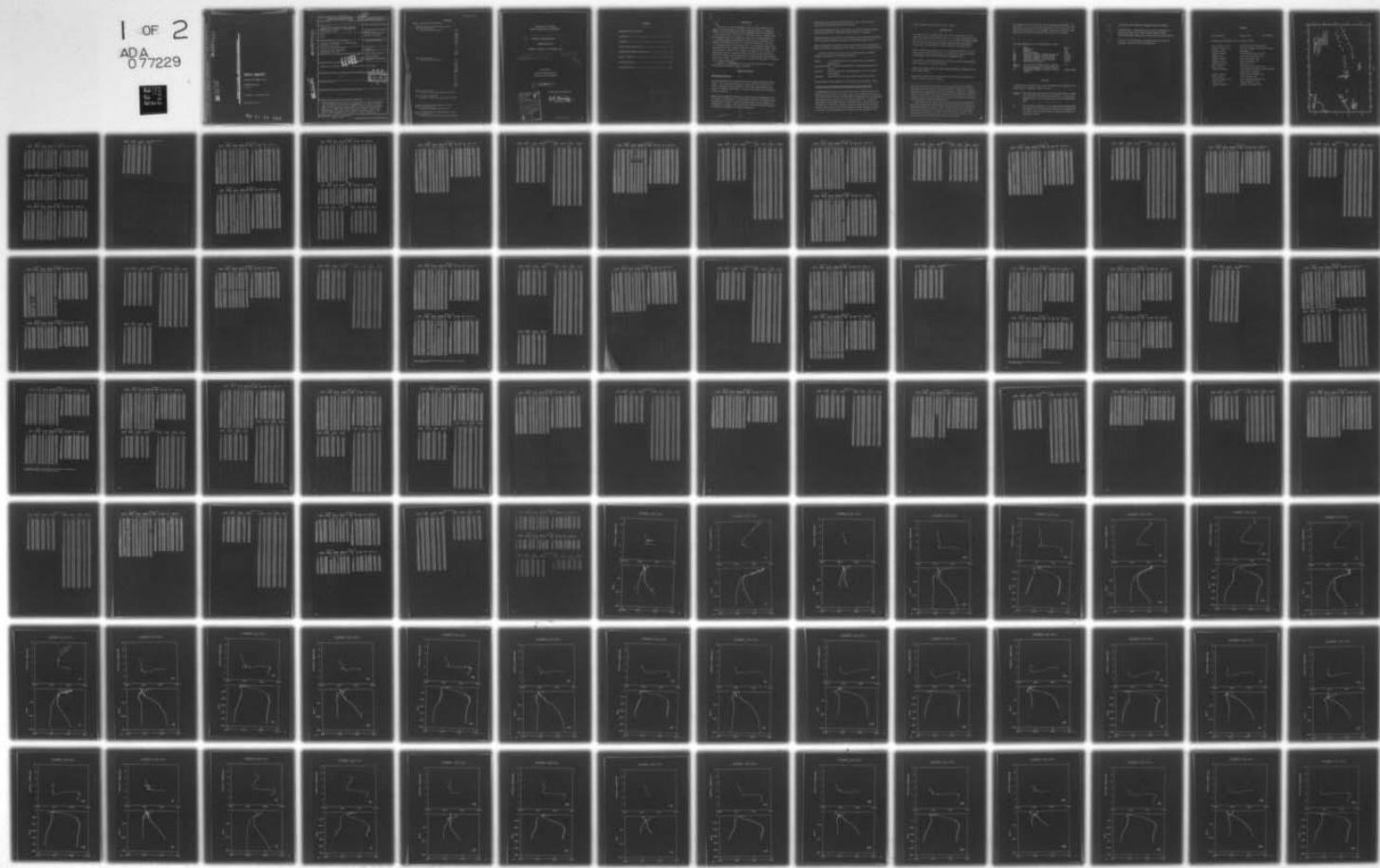
SCRIPPS INSTITUTION OF OCEANOGRAPHY LA JOLLA CA F/G 8/10
PHYSICAL AND CHEMICAL DATA INDOMED EXPEDITION LEG XIII, 9 NOVEM--ETC(U)
NOV 79 N00014-75-C-0L52

F/G 8/10

EG XIII, 9 NOVEM-

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1 OF 2
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Physical and Chemical Data Report

INDOMED Expedition

Leg XIII

SIO R - 79-15

AD A 077229

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UNIVERSITY OF CALIFORNIA SCRIPPS INSTITUTION OF OCENOGRAPHY

data report

PHYSICAL AND CHEMICAL DATA

INDOMED Expedition

Leg XIII

9 November - 22 December 1978

SIO Reference 79-15

79 11 21 024

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Indomed Expedition Leg XIII was carried out from 9 November to 22 December 1978 aboard RV Melville to study the characteristics and flow of the abyssal waters of the southern part of the Argentine Basin and the area between the South Sandwich Islands and the mid-Atlantic Ridge. Forty-two hydrographic stations were occupied with sampling to the bottom for temperature, salinity, oxygen, phosphate,...		

24 October 1979

CORRIGENDA

PHYSICAL AND CHEMICAL DATA REPORTS

1. INDOPAC Expedition (SIO Reference 78-21)

Page 172, Station 89

Calcium values should be:

10.09

10.09

10.08

10.06

10.04

9.97

9.94

10.02

10.09

10.11

10.15

10.21

10.18

10.19

10.18

Page 172, Station 93

Calcium values should be:

10.04

10.05

10.02

9.92

9.98

9.96

10.01

10.06

10.12

10.15

10.18

10.18

10.18

10.18

10.18

Page 173, Station 97

Calcium at 358 meters should read 10.048

Page 341, Station STD 77U

Salinity at 2800 meters should read 34.669

2. Climax II Expedition (SIO Reference 75-6)

Page 53, Station A4 18

Fifth depth should read 77 (not 7)

3. Burton ISLAND Expedition (SIO Reference 71-15)

Page 5, Station 11

Latitude should read $19^{\circ}56.1S$ (not $19^{\circ}65.1S$)

UNIVERSITY OF CALIFORNIA
SCRIPPS INSTITUTION OF OCEANOGRAPHY

⑥ PHYSICAL AND CHEMICAL DATA

INDOMED Expedition

Leg XIII, 9 November to 22 December 1978.

⑯ 15 NΦΦΦ14-75-C-0152

⑮ 11 NOV 79

⑯ 121

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INTRODUCTION

1 14 15

13 This report presents hydrographic data for Indomed Expedition Leg XIII. Data from Indomed Legs I, XIV, and XV will appear in subsequent reports. Data from Indomed Legs III through VII have been distributed as GOG Publication No. 145 and will be published later in a GEOSECS atlas. No hydrographic data was collected on other legs of Indomed Expedition.

13 → Indomed Expedition Leg XIII was carried out from 9 November to 22 December 1978 aboard RV Melville to study the characteristics and flow of the abyssal waters of the southern part of the Argentine Basin and the area between the South Sandwich Islands and the mid-Atlantic Ridge. Forty-two hydrographic stations were occupied with sampling to the bottom for temperature, salinity, oxygen, phosphate, silicate, nitrate and nitrite; CTD's were lowered, weather permitting, on stations where the bottom depth was less than 5400m. Free-vehicle current meters were deployed on 9 stations with 7 being recovered.

13 Leg XIII of Indomed Expedition was sponsored by the Office of Naval Research and the National Science Foundation.

STANDARD PROCEDURES

Hydrographic Cast Data

The observed data have been evaluated using the method described by Klein (1973). This involves consideration of their variation as functions of density or depth and their relations to each other, and comparison with previous or adjacent observations. Vertical sections were also considered in data evaluation.

Temperature was measured using paired deep-sea reversing thermometers and is reported to hundredths of a Celsius degree except for the deepest levels where specially scaled low range thermometers were read and tabulated to thousandths of a degree. Most bottles below 100 meters included unprotected (pressure) thermometers for depth determination.

3

Water samples were obtained from Nansen bottles hung on the CTD wire in conjunction with CTD lowerings on most stations.

Salinity was determined using a Guildline Autosal (1975) inductive salinometer and a University of Washington (1960) conductive salinometer.

Dissolved oxygen was determined by the Winkler method as modified by Carpenter (1965) using the equipment and procedures outlined by Anderson (1971).

Reactive phosphate was determined using a Hitachi Model 100-10 spectrophotometer by the method of Murphy and Riley (1962) as described by Anderson (1971).

Silicate, nitrite, and nitrate were determined using an automated analyzer consisting of the following components:

Sampler: A. H. Thomas Model 253 Little Dipper with a 20 position sampling rack.

Proportioning Pump: Technicon^R AutoAnalyzer^R II Proportioning pump with air bar.

Detectors: Hitachi Model 100-10 spectrophotometers with flow through cell adaptors.

Recorders: Hitachi Model 056 two pen recorders with felt tip pens.

The procedures used are basically those described in Atlas et.al. (1971).

In-situ Conductivity/Temperature/Depth/Oxygen Recorder (CDTO) Data

A GEOSECS modified version of the Neil Brown type of CDTO was used on the majority of the stations. The oxygen sensor failed during the cruise so no data was processed. The CTD was calibrated by comparisons with data obtained from Nansen bottles placed on the wire during the CTD casts. After the application of corrections based on the Nansen bottles, the CTD data were averaged over 2.5 decibar intervals. Depth was calculated from the pressure, the mean density of the overlaying water column, and the local value of gravity. The CTD temperature and salinity data are tabulated to the

nearest thousandths for all depths in this report.

TABULATED DATA

The time reported is Greenwich Mean Time. For CTD lowerings it is the "start down" time, and for bottle casts it is the time of messenger release. When more than one bottle cast was lowered on a station the messenger times for the first and last casts are given. Multiple casts, excluding the surface cast, are indicated by a letter following the observed depth.

Station positions were based on satellite navigation and are for the messenger time on single cast stations. On multiple cast stations the deep cast messenger time position was used for hydrographic data.

Bottom depths, determined acoustically, have been corrected using Matthews (1939) tables and are reported in meters.

Weather and dominant waves are coded using the National Oceanographic Data Center (NODC) method.

Data from the sample bottle casts and the CTD lowerings are tabulated followed by computer curves of CTD data.

Data from the bottle casts appears for the most part on even numbered pages but a few casts appear on right hand pages. Temperature, salinity and oxygen are interpolated from the observations on the right. Computed values of thermosteric anomaly are included with the observed levels and computed values of sigma-t, thermosteric anomaly and geopotential anomaly are included with the interpolated levels.

Data from the CTD usually appears on the facing odd numbered pages but on some pages the cruise name and CTD notation have been removed and the tabulated data entered on a left or right hand page with the bottle cast data. Temperature and salinity are tabulated at closer standard intervals than in previous reports. Computed values of sigma-t, thermosteric anomaly and geopotential anomaly are included.

Two computer plots of the data for each CTD lowering are included. The upper plot is a curve of potential temperature versus salinity while the lower plot shows profiles of the in-situ temperature and salinity versus depth with the observed sample bottle data plotted for comparison.

The column headings are to be interpreted as follows:

Z	Depth	Meters
T	Temperature	C°
S	Salinity	‰
O2	Dissolved Oxygen	ml/L
P04	"Reactive" inorganic phosphate-phosphorus	ug at/L
SI03	"Reactive" inorganic silicate-silicon	ug at/L
N02	"Reactive" inorganic nitrite-nitrogen	ug at/L
N03	"Reactive" inorganic nitrate-nitrogen	ug at/L
DT	δT Thermosteric anomaly	cl/ton
SIGT or SIGMA T	$\sigma_t = (\rho_{s,t,0}^{-1})10^3$ where $\rho_{s,t,0}$, is the density the parcel of sea water would have if moved isothermally to the sea surface.	g/L
DD	Geopotential anomaly, referred to the sea surface.	dynamic meters

FOOTNOTES

In addition to footnotes, several special notations are used without footnotes because the meaning is always the same.

A and B: After depth value indicates successively deeper casts on expedition legs which have multiple cast stations. The upper cast originating at or near the surface has no letter following the depth.

K: Both protected thermometers in the sample bottle malfunctioned. The temperature was inferred from the pressure thermometer and wire depth. For this expedition, the values are believed accurate to $\pm 0.05^\circ\text{C}$.

- P: After depth value indicates the Nansen bottles poststripped.
- U: Uncertain value. Values which are not used in interpolation because they seem to be in error without apparent reason.
CTD station number indicates the up cast data are being reported.
- V: Because of time differences, overlapping casts show some differences. Values not used in interpolation.

PERSONNEL

Ship's Captain: Phinney, Alan **RV MELVILLE**

Personnel Participating in the Collection of Data:

Reid, Joseph L. Prof.	Chief Scientist, Professor, SIO
Antezano, Tarsico J. Dr.	Professor Asociado, University of Chile
Charter, James S.	Programmer, SIO
Costello, James P.	Staff Research Associate, SIO
Graham, Jerry B.	Electronics Technician, SIO
Johnson, Frank W.	Marine Technician, SIO
Johnson, Treve L.	Marine Technician, SIO
Mantyla, Arnold W.	Specialist, SIO
Muus, David A.	Staff Research Associate, SIO
Olivera, Ricardo M.	Staff Research Associate, Servicio Hidrografía Naval, Argentina
Schmitt, James A.	Electronics Technician, SIO
Sachs, Neal A.	Staff Volunteer, SIO
Stallard, Martha O. Dr.	Staff Research Associate, SIO
Sweet, Paul R.	Marine Technician, SIO
Witherow, Sharon L.	Resident Technician, SIO

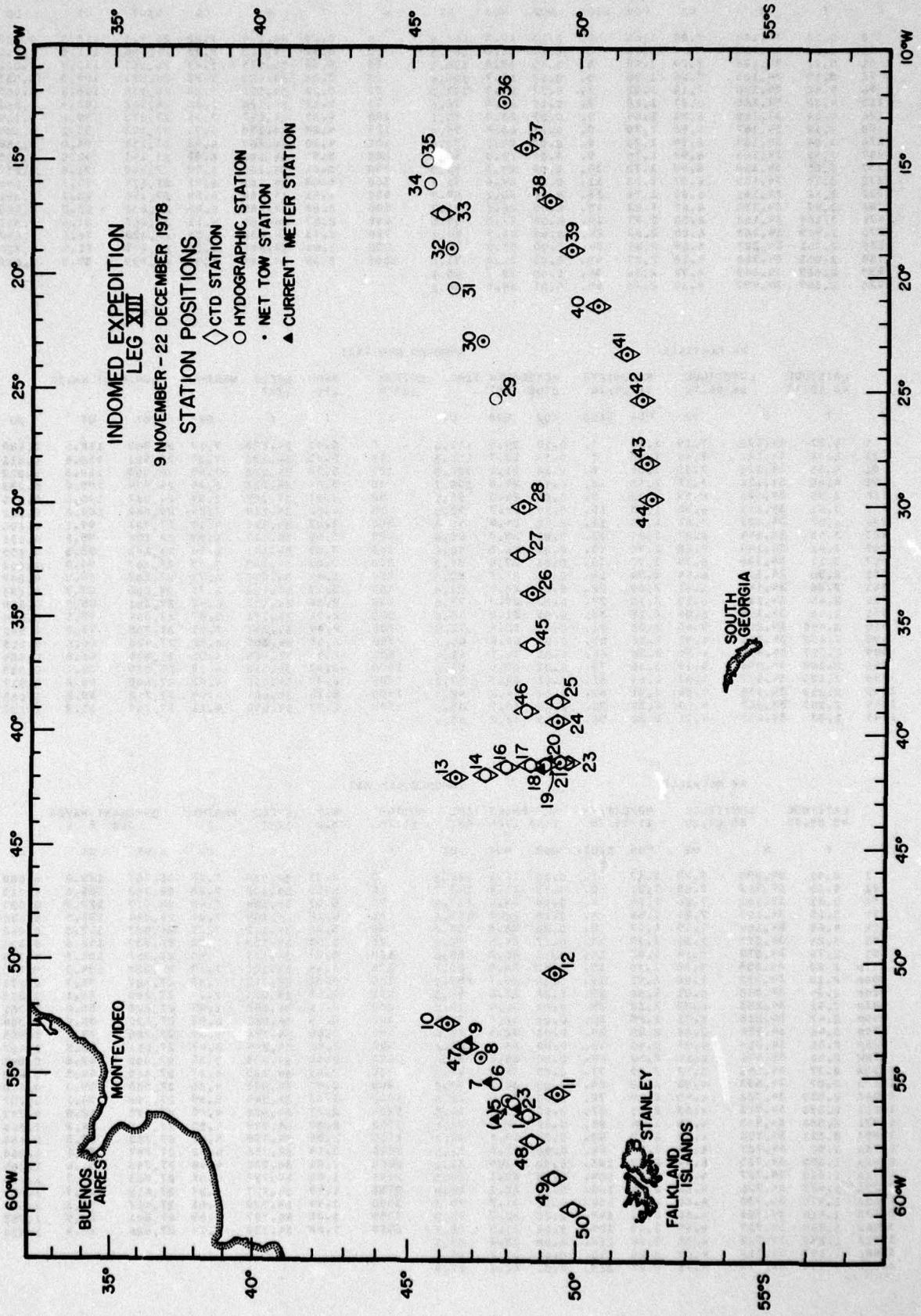


FIGURE I

RV MELVILLE

INOUTED LEG XIII

1

LATITUDE 48 38.2S	LONGITUDE 56 49.9W	MO/DAY/YR 11/14/78	MESSENGER 0146	TIME GMT	BOTTOM 1093M	WIND 29U	SPEED 15KT	WEATHER 1	DOMINANT WAVES						
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	U2	SIGT	UT	DD
0	5.53	34.104	7.22	1.49	5.	0.13	19.3	113.8	0	5.53	34.104	7.22	26.925	113.8	0.000
30	5.26	34.123	1.45	5.	0.14	19.8	109.3	10	5.42	34.113	7.23	26.946	111.9	0.011	
61	5.21	34.126	1.45	5.	0.15	19.8	108.5	20	5.33	34.119	7.24	26.961	110.4	0.022	
76	5.19	34.125	7.26	1.46	5.	0.12	19.7	108.4	30	5.26	34.123	7.25	26.973	109.3	0.033
96	4.62	34.138	7.10	1.62	7.	0.17	21.5	101.3	50	5.23	34.126	7.26	26.978	108.8	0.055
111	4.30	34.165	6.97	1.68	8.	0.19	23.3	96.0	75	5.19	34.126	7.26	26.982	108.4	0.083
126	4.24	34.169	6.93	1.69	9.	0.09	23.5	95.1	100	4.52	34.147	7.06	27.075	99.6	0.109
150	4.12	34.167	6.96	1.70	9.	0.07	23.8	94.0	125	4.24	34.170	6.93	27.123	95.1	0.134
176	4.04	34.164	6.94	1.70	9.	0.02	24.0	93.4	150	4.12	34.167	6.96	27.134	94.0	0.158
207	3.92	34.160	6.99	1.70	9.	0.01	24.0	92.6	200	3.95	34.162	6.98	27.147	92.8	0.205
237	3.85	34.160	6.99	1.72	10.	0.00	24.3	91.9	250	3.81	34.160	6.99	27.160	91.6	0.252
272	3.75	34.158	6.97	1.73	11.	0.00	24.6	91.1	300	3.68	34.161	6.91	27.174	90.3	0.299
322	3.62	34.161	6.85	1.76	13.	0.01	25.2	89.7	400	3.41	34.156	6.64	27.196	88.2	0.391
386	3.47	34.156	6.67	1.83	15.	0.00	26.2	88.7	500	3.03	34.155	6.46	27.230	85.0	0.480
471	3.104	34.153	6.52	1.97	19.	0.00	27.5	85.6	600	2.67	34.180	6.11	27.265	81.6	0.567
570	2.915	34.165	6.25	2.02	24.	0.00	28.9	83.1	700	2.73	34.238	5.59	27.323	76.1	0.650
680	2.761	34.227	5.69	2.21	34.	0.00	31.0	77.1	800	2.65	34.297	5.13	27.377	71.0	0.728
789	2.651	34.288	5.18	2.27	43.	0.00	32.6	71.6	1000	2.59	34.444	4.36	27.499	59.5	0.868
899	2.669	34.369	4.72	2.34	54.	0.00	33.7	65.6							
1020	2.569	34.457	4.30	2.45	65.	0.01	34.6	58.2							

RV MELVILLE

INOUTED LEG XIII

3

LATITUDE 48 15.4S	LONGITUDE 56 06.9W	MO/DAY/YR 11/14/78	MESSENGER 0755	TIME GMT	BOTTOM 1877M	WIND 27U	SPEED 17KT	WEATHER	DOMINANT WAVES						
Z	T	S	U2	P04	S103	N02	N03	DT	Z	I	S	U2	SIGT	UT	DD
1	5.37	34.123	7.19	1.50	7.	0.15	20.5	110.6	0	5.37	34.123	7.19	26.960	110.6	0.000
21	5.33	34.121	7.49	1.48	7.	0.16	20.7	110.3	10	5.35	34.123	7.37	26.961	110.4	0.011
51	4.95	34.123	7.33	1.54	8.	0.16	21.2	105.9	20	5.33	34.122	7.48	26.963	110.3	0.022
91	4.40	34.116	7.18	1.65	8.	0.18	22.8	100.7	30	5.24	34.123	7.44	26.974	109.2	0.033
126	3.95	34.131	6.99	1.72	9.	0.09	24.5	95.1	50	4.97	34.124	7.34	27.007	106.1	0.055
157	3.81	34.141	6.95	1.73	10.	0.04	24.7	93.0	75	4.62	34.119	7.24	27.042	102.8	0.081
192	3.57	34.133	7.14	1.73	10.	0.02	24.6	91.3	100	4.27	34.120	7.13	27.081	99.1	0.106
227	3.45	34.141	6.87	1.81	13.	0.02	25.8	89.6	125	3.96	34.132	6.99	27.122	95.2	0.131
267	3.41	34.149	6.68	1.90	15.	0.01	26.5	88.6	150	3.83	34.141	6.96	27.142	93.3	0.155
307	3.11	34.136	6.75	1.93	16.	0.01	27.0	87.0	200	3.53	34.135	7.09	27.167	90.9	0.202
351	2.70	34.131	6.64	1.94	18.	0.01	27.7	85.5	250	3.44	34.148	6.74	27.187	89.0	0.247
401	2.86	34.149	6.41	2.00	22.	0.01	28.5	83.8	300	3.17	34.140	6.73	27.206	87.3	0.293
461	2.65	34.180	6.10	2.10	27.	0.02	29.8	79.8	400	2.86	34.150	6.42	27.241	83.9	0.380
531	2.43	34.199	5.86	2.18	33.	0.01	31.0	76.6	500	2.51	34.191	5.97	27.304	77.9	0.464
610	2.440	34.254	5.45	2.33	41.	0.01	32.4	72.5	600	2.44	34.247	5.51	27.355	73.0	0.542
699	2.652	34.353	4.82	2.36	51.	0.01	33.8	66.7	700	2.65	34.355	4.82	27.423	66.6	0.615
809	2.507	34.408	4.54	2.50	60.	0.01	34.4	61.4	800	2.53	34.406	4.55	27.475	61.8	0.684
968	2.580	34.498	4.19	2.46	72.	0.01	35.0	53.5	1000	2.57	34.515	4.15	27.575	52.2	0.808
1146	2.328	34.577	4.03	2.44	81.	0.01	34.7	47.2	1200	2.50	34.596	4.02	27.645	45.6	0.917
1345	2.213	34.632	4.00	2.41	87.	0.02	34.2	42.1	1500	2.13	34.661	4.04	27.712	39.3	1.065
1544	2.101	34.667	4.06	2.34	92.	0.00	33.7	38.6	1750	1.97	34.690	4.11	27.748	35.9	1.177
1743	1.97	34.688	4.11	2.32	96.	0.00	33.2	35.9							

RV MELVILLE

INOUTED LEG XIII

5

LATITUDE 48 04.8S	LONGITUDE 56 07.2W	MO/DAY/YR 11/14/78	MESSENGER 1443	TIME GMT	BOTTOM 3917M	WIND 31U	SPEED 17KT	WEATHER 1	DOMINANT WAVES 310 2 4						
Z	T	S	U2	P04	S103	N02	N03	DT	Z	I	S	U2	SIGT	UT	DD
1	6.81	34.099	7.23	1.17	1.	0.18	16.0	129.8	0	6.81	34.099	7.23	26.757	129.8	0.000
21	6.35	34.103	7.48	1.21	2.	0.19	16.2	123.7	10	6.59	34.102	7.38	26.788	126.8	0.013
51	5.81	34.101	7.26	1.28	4.	0.18	18.6	117.3	20	6.37	34.104	7.48	26.819	123.9	0.025
91	5.15	34.103	7.20	1.56	6.	0.19	20.6	109.6	30	6.18	34.104	7.44	26.844	121.5	0.038
126	4.62	34.104	7.19	1.67	8.	0.20	22.3	103.8	50	5.83	34.102	7.27	26.887	117.5	0.062
156	3.24	34.077	7.36	1.79	12.	0.27	24.6	92.6	75	5.41	34.103	7.22	26.939	112.6	0.091
191	2.76	34.072	7.26	1.82	14.	0.11	25.7	88.8	100	5.07	34.107	7.20	26.982	108.5	0.119
247P	2.23	34.058	7.30	1.90	15.	0.02	26.5	85.7	125	4.64	34.105	7.19	27.028	104.0	0.145
280P	2.10	34.052	7.00	1.91	16.	0.02	26.7	85.2	150	5.51	34.082	7.33	27.127	94.7	0.171
334P	2.34	34.088	6.81	2.00	20.	0.02	28.0	84.3	200	2.65	34.071	7.27	27.196	88.1	0.217
406P	2.61	34.183	6.02	2.12	29.	0.01	30.1	79.2	250	2.21	34.058	7.27	27.223	85.6	0.261
449P	2.47	34.215	5.71	2.25	35.	0.01	31.4	75.7	300	2.16	34.061	6.93	27.230	85.0	0.304
529P	2.46	34.254	5.36	2.30	40.	0.01	32.3	72.6	400	2.60	34.174	6.09	27.285	79.7	0.388
622P	2.51	34.313	4.97	2.46	48.	0.00	33.4	66.6	500	2.46	34.244	5.47	27.351	73.5	0.467
872P	2.43	34.476	4.18	2.52	69.	0.00	35.2	55.6	600	2.50	34.299	5.06	27.392	69.6	0.541
1015A	2.37	34.551	3.98	2.42	77.	0.00	34.9	49.5	700	2.49	34.365	4.67	27.445	64.5	0.612
1210A	2.27	34.633	4.03	2.39	84.	0.00	34.3	42.5	800	2.45	34.430	4.36	27.500	59.3	0.678
1406A	2.550	34.722	4.45	2.19	72.	0.00	31.3	38.0	1000	2.38	34.544	3.99	27.598	50.1	

INDOMED LEG XIII CTD

LATITUDE 46 38.2S	LONGITUDE 56 49.9W	MO/DAY/YR 11/14/78	START TIME 0057 GMT	
Z	T	SIGMA T	DT	DD
0	5.547	34.108	26.927	113.7 0.000
10	5.485	34.107	26.933	113.1 0.011
20	5.255	34.111	26.964	110.2 0.023
30	5.242	34.112	26.966	109.9 0.034
40	5.230	34.112	26.968	104.6 0.045
50	5.223	34.112	26.968	103.7 0.056
75	5.179	34.113	26.974	109.2 0.085
100	4.405	34.142	27.084	98.8 0.109
125	4.212	34.159	27.118	95.5 0.134
150	4.161	34.159	27.124	95.0 0.158
175	4.068	34.157	27.132	94.2 0.182
200	3.982	34.156	27.141	94.3 0.206
225	3.885	34.153	27.148	92.8 0.230
250	3.803	34.153	27.156	92.0 0.253
275	3.733	34.151	27.161	91.5 0.277
300	3.660	34.151	27.168	90.8 0.300
350	3.480	34.144	27.180	89.7 0.346
400	3.377	34.152	27.196	88.1 0.392
450	3.208	34.152	27.212	86.6 0.438
500	3.113	34.153	27.222	85.7 0.482
550	3.000	34.158	27.236	84.4 0.526
600	2.956	34.176	27.254	82.6 0.570
650	2.946	34.213	27.285	79.7 0.613
700	2.758	34.230	27.315	76.9 0.654
750	2.762	34.269	27.346	74.0 0.694
800	2.666	34.286	27.366	71.9 0.732
850	2.705	34.322	27.393	69.5 0.770
900	2.679	34.350	27.418	67.2 0.807
950	2.655	34.387	27.449	64.2 0.842
1000	2.604	34.432	27.489	60.3 0.876
1030	2.579	34.450	27.506	58.8 0.896

RV MELVILLE

INDOMED LEG XIII

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LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
47 38.8S	55 04.5W	11/15/78	0100 0741	GMT	5260M	0	14Kt	1							
Z	T	S	O2	P04	SI03	N02	N03	DT	Z	T	S	O2	SI07	DT	DD
0	6.33	34.098	7.60	1.20	3.	0.18	16.9	123.8	0	6.33	34.098	7.60	26.820	123.8	0.000
20	5.89	34.088	7.54	1.34	4.	0.17	19.0	119.2	10	6.12	34.092	7.58	26.842	121.7	0.012
51	5.10	34.106	7.33	1.54	8.	0.16	21.6	108.8	20	5.89	34.088	7.54	26.869	119.2	0.024
81	4.23	34.108	7.28	1.66	9.	0.22	23.1	99.5	30	5.65	34.094	7.97	26.902	116.0	0.036
102	3.69	34.105	7.30	1.73	10.	0.31	24.2	94.5	50	5.13	34.106	7.34	26.974	109.2	0.059
127	3.41	34.104	7.23	1.75	11.	0.09	25.0	92.0	75	4.40	34.109	7.29	27.058	101.3	0.085
157	3.39	34.133	7.10	1.76	11.	0.05	25.2	89.7	100	3.73	34.106	7.30	27.124	94.9	0.110
192	3.14	34.119	7.07	1.80	13.	0.03	25.8	88.5	125	3.42	34.105	7.29	27.154	92.2	0.134
226	2.90	34.108	7.07	1.87	15.	0.02	26.6	87.3	150	3.59	34.129	7.13	27.175	90.1	0.157
266	2.73	34.110	6.91	1.89	17.	0.02	27.1	85.7	200	3.08	34.117	7.07	27.195	88.2	0.202
306	2.73	34.126	6.69	1.94	20.	0.02	28.1	84.5	250	2.78	34.109	6.99	27.216	86.3	0.246
351	2.76	34.156	6.30	2.04	23.	0.02	29.1	82.5	300	2.73	34.124	6.73	27.233	84.7	0.290
401	2.607	34.173	6.15	2.08	27.	0.01	30.0	79.9	400	2.61	34.174	6.15	27.282	80.0	0.374
460	2.391	34.206	5.83	2.17	34.	0.02	31.6	75.7	500	2.27	34.224	5.69	27.351	73.4	0.453
530	2.215	34.239	5.57	2.27	40.	0.01	32.5	71.9	600	2.36	34.307	4.97	27.409	67.9	0.526
615A	2.41	34.322	4.84	2.26	50.	0.01	33.8	67.1	700	2.45	34.385	4.62	27.465	62.7	0.595
699	2.452	34.384	4.62	2.41	58.	0.02	34.9	62.7	800	2.48	34.463	4.29	27.525	57.0	0.659
815A	2.48	34.474	4.24	2.43	69.	0.00	35.1	56.2	1000	2.35	34.566	4.07	27.617	48.3	0.774
1012A	2.34	34.569	4.06	2.49	76.	0.00	34.9	47.9	1200	2.57	34.678	4.27	27.688	41.5	0.876
1258A	2.64	34.705	4.35	2.15	68.	0.01	31.5	40.0	1500	2.28	34.713	4.28	27.740	36.6	1.016
1534B	2.23	34.711	4.28	2.22	84.	0.00	32.3	36.3	1750	2.38	34.777	4.68	27.783	32.5	1.125
1781B	2.41	34.787	4.75	1.97	71.	0.01	29.0	31.9	2000	2.41	34.821	5.07	27.816	29.4	1.228
2029B	2.41	34.824	5.09	1.82	65.	0.01	27.3	25.1	2250	2.14	34.804	4.96	27.825	28.5	1.329
2276B	2.10	34.861	4.94	1.94	76.	0.01	28.1	28.4	2500	1.69	34.754	4.69	27.821	28.9	1.426
2525B	1.65	34.750	4.67	2.13	98.	0.01	30.9	29.0	2750	1.43	34.761	4.70	27.828	28.2	1.520
2771B	1.418	34.740	4.70	2.22	106.	0.01	31.6	28.1	3000	1.21	34.731	4.73	27.836	27.4	1.610
3018B	1.190	34.730	4.73	2.23	113.	0.01	32.2	27.4	3250	1.03	34.716	4.81	27.837	27.4	1.697
3264B	1.017	34.715	4.82	2.24	119.	0.00	32.6	27.4	3500	0.85	34.711	4.91	27.844	26.8	1.780
3511B	0.838	34.710	4.91	2.29	122.	0.01	32.6	26.7	3750	0.62	34.688	5.00	27.848	26.4	1.859
3757B	0.610	34.697	5.00	2.29	126.	0.01	33.0	26.4	4000	0.44	34.689	5.10	27.851	26.1	1.933
4003B	0.441	34.688	5.10	2.31	129.	0.01	33.2	26.1	4250	0.34	34.683	5.14	27.853	25.9	2.003
4250B	0.336	34.683	5.14	2.34	131.	0.01	33.3	25.9	4500	0.27	34.680	5.19	27.853	25.9	2.070
4496B	0.274	34.679	5.19	2.38	131.	0.01	33.5	25.9	4750	0.24	34.678	5.18	27.853	25.9	2.137
4741B	0.243	34.677	5.18	2.39	132.	0.01	33.4	25.9	5000	0.24	34.677	5.25	27.853	25.9	2.203
4986B	0.238	34.676	5.25	2.38	133.	0.02	33.6	25.9							
5182B	0.235	34.674	5.23	2.31	132.	0.04	33.5	26.1							

RV MELVILLE

INDOMED LEG XIII

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LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
47 16.8S	54 09.8W	11/15/78	1604 1917	GMT	5902M	340	17Kt	1	340 4 5						
Z	T	S	O2	P04	SI03	N02	N03	DT	Z	T	S	O2	SI07	DT	DD
0	10.79	34.547	6.55	0.60	0.	0.14	6.8	156.0	0	10.79	34.547	6.55	26.480	136.0	0.000
15	10.74	34.551	6.60	0.58	0.	0.15	6.7	154.9	10	10.77	34.550	6.59	26.386	155.5	0.016
30	10.60	34.561	6.62	0.59	0.	0.15	6.8	151.8	20	10.69	34.551	6.61	26.302	154.0	0.031
55	10.68	34.716	6.40	0.61	0.	0.17	6.6	145.1	30	10.60	34.561	6.62	26.325	151.8	0.046
70	10.75	34.732	6.33	0.66	0.	0.20	7.5	141.7	50	10.82	34.685	6.45	26.381	146.4	0.076
85	8.68	34.550	6.24	1.12	2.	0.13	15.2	122.2	75	10.14	34.679	6.29	26.697	135.4	0.112
101	7.06	34.354	6.43	1.34	4.	0.17	18.1	114.0	100	7.14	34.365	6.42	26.920	114.3	0.144
126	6.09	34.279	6.37	1.52	5.	0.11	20.9	107.3	125	6.11	34.280	6.37	26.992	107.5	0.172
151	5.24	34.239	6.20	1.69	8.	0.05	24.2	100.4	150	5.27	34.291	6.21	27.064	100.6	0.198
175	5.05	34.233	6.17	1.72	9.	0.03	24.8	98.8	200	4.69	34.207	6.31	27.104	96.9	0.249
211	4.52	34.193	6.38	1.75	10.	0.01	25.3	96.1	250	4.25	34.182	6.43	27.132	94.2	0.297
275	4.15	34.181	6.47	1.79	12.	0.01	25.8	93.3	300	4.06	34.186	6.40	27.154	92.1	0.345
370	3.77	34.191	6.20	1.90	16.	0.01	27.7	88.8	400	3.50	34.177	6.25	27.204	87.4	0.438
471	2.86	34.147	6.37	2.01	22.	0.01	28.8	84.0	500	2.72	34.151	6.32	27.254	82.7	0.526
589	2.52	34.183	5.99	2.17	29.	0.01	30.6	79.5	600	2.52	34.192	5.95	27.304	77.9	0.609
708	2.55	34.267	5.29	2.31	41.	0.01	32.9	72.4	700	2.55	34.262	5.34	27.358	72.8	0.688
826	2.63	34.351	4.80	2.41	51.	0.01	34.0	66.7	800	2.62	34.354	4.90	27.409	68.0	0.765
879A	2.60	34.387	4.56	2.40	56.	0.00	34.8	63.7	1000	2.48	34.441	4.33	27.506	58.7	0.899
976	2.50	34.425	4.39	2.47	57.	0.00	35.3	60.0	1200	2.62	34.582	4.14	27.607	49.2	1.020
1053A	2.47	34.479	4.21	2.46	68.	0.00	35.6	55.7	1500	2.60	34.687	4.26	27.693	41.1	1.180
1227A	2.65	34.597	4.13	2.38	68.	0.00	34.0	49.2	1750	2.50	34.791	4.41	27.744	36.1	1.300
1425A	2.62	34.666	4.24	2.26	71.	0.00	32.8	42.8	2000	2.49	34.792	4.73	27.786	32.2	1.413
1649A	2.542	34.720	4.36	2.16	75.	0.01	31.5	38.1	2250	2.30	34.799	4.84	27.808	30.2	1.520
1873A	2.46	34.765	4.51	2.02	72.	0.01	30.1	34.0	2500	1.80	34.787	4.56	27.806	30.3	1.623
2096A	2.51	34.808	4.88	1.91	66.	0.01	27.9	31.1	2750	1.55	34.780	4.61	27.819	29.2	1.722
2319A	2.17	34.788	4.82	2.00	77.	0.01	29.0	30.0	3000	1.35	34.786	4.67	27.830	28.0	1.816
2543A	1.72	34.736	4.51	2.17	99.	0.00	31.9	30.4	3250	1.14	34.782	4.75	27.834	27.7	1.906
2766A	1.54	34.739	4.62	2.20</td											

RV MELVILLE

INDOMED LEG XIII

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LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DUMINANT WAVES						
46 18.0S	52 01.0W	11/16/78	0725 1145	GMT	6060M	34U	12KT	1	340 5 5						
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
0	10.81	34.758	6.38	0.62	0.	0.15	6.6	140.8	0	10.81	34.758	6.38	26,641	140.8	0.000
20	10.80	34.756	6.36	0.62	0.	0.16	6.6	140.8	10	10.81	34.757	6.37	26,641	140.8	0.014
31	10.78	34.753	6.34	0.68	0.	0.17	6.7	140.6	20	10.80	34.756	6.36	26,641	140.8	0.028
56	10.74	34.778	6.27	0.63	0.	0.18	6.8	138.1	30	10.76	34.753	6.34	26,642	140.6	0.042
71	10.33	34.743	6.14	0.77	1.	0.19	9.4	138.8	50	10.75	34.767	6.30	26,658	139.1	0.070
87	9.15	34.614	6.03	1.06	2.	0.05	14.1	124.5	75	10.00	34.702	6.11	26,739	131.5	0.105
102	9.46	34.736	5.87	1.08	3.	0.03	14.7	120.3	100	9.95	34.717	5.89	26,853	120.7	0.137
127	8.96	34.662	6.02	1.10	3.	0.03	15.1	118.1	125	9.03	34.676	6.00	26,879	118.1	0.167
153	8.24	34.551	6.01	1.22	3.	0.03	17.0	115.6	150	8.83	34.566	6.01	26,902	116.0	0.197
178	7.42	34.450	5.90	1.37	5.	0.03	20.0	111.7	200	7.22	34.458	5.80	26,979	108.7	0.255
214	7.14	34.462	5.76	1.44	6.	0.04	21.9	107.0	250	6.19	34.350	5.89	27,037	103.2	0.309
280	5.30	34.245	6.08	1.70	9.	0.02	25.4	100.6	300	4.99	34.220	6.17	27,080	99.1	0.362
377	4.279	34.182	6.43	1.77	11.	0.03	26.5	94.5	400	4.12	34.175	6.42	27,140	93.4	0.461
479	3.723	34.164	6.37	1.89	14.	0.02	28.5	90.5	500	3.67	34.168	6.33	27,180	89.7	0.557
601	3.464	34.189	6.08	1.98	20.	0.02	29.8	86.2	600	3.47	34.190	6.08	27,217	86.2	0.649
723	3.041	34.205	5.87	2.06	27.	0.02	31.3	81.2	700	3.12	34.202	5.91	27,260	82.1	0.738
844	2.924	34.242	5.48	2.18	35.	0.02	32.8	77.4	800	2.95	34.228	5.83	27,295	78.0	0.825
995	2.76	34.312	4.97	2.31	44.	0.02	34.6	70.7	1000	2.76	34.315	4.96	27,362	70.5	0.983
1081A	2.74	34.358	4.78	2.29	50.	0.00	33.6	67.0	1200	2.71	34.420	4.51	27,471	62.1	1.129
1263	2.688	34.452	4.38	2.41	61.	0.02	36.1	59.5	1500	2.83	34.604	4.27	27,605	49.4	1.321
1377A	2.53	34.497	4.18	2.43	72.	0.00	35.4	54.8	1750	2.60	34.657	4.18	27,669	43.4	1.462
1527A	2.90	34.628	4.30	2.25	62.	0.00	32.5	48.3	2000	2.57	34.715	4.36	27,718	38.7	1.593
1674A	2.622	34.633	4.16	2.31	74.	0.00	33.2	45.3	2250	2.59	34.777	4.65	27,765	34.1	1.715
1822A	2.58	34.676	4.23	2.20	75.	0.01	32.5	41.7	2500	2.89	34.783	4.71	27,788	32.1	1.832
1972A	2.54	34.701	4.30	2.22	77.	0.00	31.9	39.5	2750	2.16	34.782	4.74	27,806	30.3	1.943
2119A	2.69	34.770	4.61	2.03	67.	0.00	29.4	35.5	3000	1.93	34.779	4.61	27,822	28.7	2.050
2268A	2.57	34.777	4.66	2.03	70.	0.00	29.2	34.0	3250	1.59	34.745	4.62	27,823	28.7	2.152
2468	2.43	34.784	4.72	2.02	73.	0.02	28.9	32.3	3500	1.25	34.720	4.70	27,825	28.6	2.248
2661A	2.22	34.780	4.69	2.05	80.	0.00	29.4	51.0	3750	1.02	34.712	4.79	27,853	27.7	2.340
2860A	2.08	34.785	4.81	2.01	82.	0.01	29.0	29.5	4000	0.80	34.702	4.67	27,840	27.2	2.425
3057A	1.86	34.776	4.81	2.06	91.	0.00	29.5	28.5	4250	0.59	34.689	5.01	27,882	26.9	2.508
3259A	1.536	34.743	4.62	2.21	106.	0.01	31.7	28.7	4500	0.46	34.685	5.10	27,846	26.5	2.581
3452A	1.30	34.722	4.68	2.26	114.	0.01	32.3	28.7	4750	0.45	34.678	5.15	27,887	26.4	2.653
3698A	1.065	34.713	4.78	2.26	119.	0.01	32.4	27.9	5000	0.29	34.673	5.18	27,887	26.5	2.723
3995A	0.858	34.705	4.84	2.36	123.	0.01	32.8	27.2	5250	0.28	34.673	5.17	27,888	26.4	2.792
4190A	0.633	34.690	4.98	2.34	127.	0.01	33.1	27.0	5500	0.28	34.673	5.19	27,887	26.4	2.860
4437A	0.498	34.686	5.09	2.490	131.	0.01	33.2	26.5	5750	0.29	34.670	5.24	27,884	26.7	2.930
4683A	0.373	34.679	5.13	2.38	133.	0.02	33.4	26.4	6000	0.30	34.669	5.21	27,843	26.9	3.000
4930A	0.304	34.673	5.18	2.36	133.	0.00	33.6	26.5							
5179A	0.276	34.672	5.17	2.37	133.	0.01	33.5	26.4							
5421A	0.275	34.673	5.17	2.36	134.	0.01	33.4	26.3							
5715A	0.289	34.669	5.24	2.38	134.	0.00	33.6	26.7							
6009A	0.303	34.668	5.21					26.9							

RV MELVILLE

INDOMED LEG XIII

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LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DUMINANT WAVES						
49 35.9S	55 08.7W	11/17/78	1709 1145	GMT	770M	300	12KT	2	340 3 6						
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
1	6.15	34.103	7.31	1.21	3.	0.15	18.3	121.2	0	6.15	34.103	7.31	26,846	121.2	0.000
6	6.16	34.101	7.36	1.22	3.	0.15	18.5	121.5	10	6.11	34.103	7.37	26,852	120.8	0.012
31	5.68	34.111	7.40	1.61U	1.	0.13	18.9	115.0	20	5.95	34.104	7.38	26,877	118.8	0.022
57	5.41	34.109	7.36	1.35	4.	0.11	19.1	112.1	30	5.71	34.111	7.40	26,909	115.4	0.036
77	5.29	34.103	7.34	1.33	4.	0.11	19.0	111.2	50	5.96	34.112	7.37	26,936	112.6	0.059
98	4.70	34.124	7.14	1.59	7.	0.12	21.6	105.2	75	5.81	34.106	7.34	26,952	111.3	0.087
123	4.37	34.138	7.00	1.63	9.	0.11	23.3	98.7	100	4.66	34.126	7.12	27,043	102.7	0.114
154	4.14	34.150	7.11	1.67	10.	0.20	23.5	95.5	125	4.45	34.140	7.00	27,088	98.4	0.139
194	4.02	34.160	7.03	1.68	10.	0.08	24.5	93.6	150	4.16	34.150	7.09	27,115	95.8	0.164
235	3.93	34.157	7.04	1.67	10.	0.03	24.5	92.9	200	4.01	34.163	7.03	27,141	93.4	0.212
286	3.82	34.158	7.01	1.67	11.	0.03	24.8	91.8	250	3.90	34.158	7.03	27,149	92.6	0.259
347	3.68	34.151	7.07	1.73	11.	0.03	25.1	91.0	300	3.79	34.157	7.03	27,160	91.6	0.307
418	3.61	34.156	6.79	1.78	14.	0.00	26.2	89.9	400	3.63	34.155	6.87	27,174	90.2	0.400
499	3.37	34.152	6.65	1.84	17.	0.00	27.2	88.0	500	3.57	34.153	6.65	27,198	88.0	0.493
591	3.20	34.172	6.29	1.95	22.	0.00	28.9	85.0	600	3.18	34.177	6.25	27,239	84.6	0.503
641	3.10	34.192	6.04	2.03	27.	0.00	30.0	82.6	700	2.98	34.224	5.77	27,290	79.3	0.669
692	2.99	34.220	5.80	2.12	32.	0.00	31.1	79.6							
743	2.94	34.232	5.64	2.14	34.	0.00	31.7	78.2							

10 INDOMED LEG XIII CTD

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LATITUDE</th

HV MELVILLE

INUOMED LEG XIII

Z	T	S	U2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SI07	UT	DD	DOMINANT WAVES			
																MESSENGER	TIME	BOTTOM	WIND
49 26.1S	50 02.3W	11/19/78	2012	VV01	GMT	4028M	UVW	11KT								1			
0	7.56	34.045	7.28	1.07	2.	0.16	14.5	144.0	0	7.56	34.045	7.28	26.607	144.0	0.000				
51	5.07	34.072	7.38	1.46	8.	0.13	20.7	111.0	10	6.95	34.045	7.30	26.695	135.7	0.014				
102	4.29	34.093	7.13	1.58	9.	0.20	22.7	101.3	20	6.39	34.048	7.32	26.773	128.3	0.027				
137	3.76	34.111	6.99	1.72	12.	0.02	24.6	94.6	30	5.89	34.055	7.34	26.841	121.8	0.040				
172	3.56	34.131	6.93	1.75	13.	0.00	25.3	91.4	50	5.10	34.072	7.38	26.950	111.5	0.063				
213	3.29	34.150	6.89	1.78	15.	0.00	26.1	89.0	75	4.60	34.086	7.28	27.010	105.0	0.090				
253	2.86	34.100	7.05	1.77	16.	0.02	26.2	87.5	100	4.80	34.094	7.14	27.056	101.4	0.116				
294	2.43	34.072	7.12	1.79	17.	0.00	26.5	86.2	125	5.91	34.105	7.03	27.106	96.7	0.141				
313	2.22	34.056	6.81	1.82	17.	0.00	26.6	85.8	150	5.65	34.121	6.96	27.144	93.1	0.165				
376	2.37	34.106	6.66	1.95	23.	0.00	28.4	83.1	200	5.89	34.134	6.90	27.181	89.6	0.212				
452	2.43	34.154	6.12	1.97	26.	0.00	30.0	80.0	250	2.69	34.104	7.04	27.202	87.6	0.257				
508	2.33	34.178	6.01	2.12	32.	0.01	30.6	77.4	300	2.86	34.067	7.04	27.210	86.1	0.301				
583	2.268	34.235	5.57	2.19	40.	0.00	32.4	72.6	400	2.89	34.122	6.49	27.260	82.1	0.387				
660	2.453	34.312	5.01	2.29	50.	0.00	34.1	68.2	500	2.85	34.176	6.02	27.306	77.8	0.469				
761	2.540	34.376	4.60	2.33	59.	0.00	34.8	64.1	600	2.80	34.253	5.44	27.371	71.5	0.546				
863	2.485	34.444	4.33	2.47	66.	0.00	35.3	58.5	700	2.51	34.341	4.82	27.424	66.5	0.619				
965	2.394	34.493	4.15	2.37	72.	0.00	35.4	54.0	800	2.55	34.404	4.48	27.473	61.9	0.687				
1092	2.340	34.555	4.01	2.42	79.	0.00	35.3	48.9	1000	2.36	34.512	4.11	27.572	52.5	0.811				
1220	2.257	34.594	3.82	2.40	83.	0.01	34.9	45.3	1200	2.27	34.590	3.84	27.643	45.8	0.921				
1347	2.201	34.626	4.00	2.38	87.	0.01	34.6	42.5	1500	2.12	34.659	4.05	27.711	39.3	1.069				
1474	2.135	34.652	4.05	2.36	88.	0.00	34.7	40.0	1750	2.00	34.694	4.10	27.748	35.6	1.182				
1569A	2.08	34.676	4.04	2.33	93.	0.00	35.8	37.8	2000	1.78	34.713	4.26	27.781	32.6	1.208				
1678	2.021	34.690	3.73U	2.24	94.	0.00	34.0	36.2	2250	1.56	34.719	4.45	27.801	30.6	1.367				
1773A	1.99	34.694	4.11	2.31	97.	0.00	33.4	35.7	2500	1.31	34.721	4.58	27.821	28.9	1.480				
1875A	1.91	34.705	4.14	2.26	99.	0.00	33.1	34.3	2750	1.21	34.713	4.65	27.822	26.7	1.570				
1977A	1.79	34.711	4.24	2.23	101.	0.00	33.1	32.9	3000	1.01	34.710	4.76	27.833	27.6	1.657				
2079A	1.74	34.715	4.32	2.11	102.	0.00	33.2	32.3	3250	0.95	34.707	4.80	27.835	27.7	1.792				
2182A	1.70	34.716	4.39	2.03	104.	0.00	32.8	31.9	3500	0.89	34.704	4.85	27.835	27.6	1.826				
2283A	1.49	34.719	4.48	2.13	109.	0.00	33.0	30.2	3750	0.61	34.690	4.97	27.842	26.9	1.907				
2385A	1.40	34.719	4.52	2.12	112.	0.00	32.4	29.6	4000	0.50	34.683	5.03	27.843	26.6	1.982				
2487A	1.32	34.721	4.57	2.25	114.	0.00	32.7	28.9											
2589A	1.26	34.717	4.63	2.24	116.	0.00	32.9	28.6											
2691A	1.25	34.716	4.61	2.20	117.	0.00	32.6	28.8											
2792A	1.17	34.714	4.66	2.10	119.	0.00	32.6	28.5											
2894A	1.062	34.712	4.65	2.18	124.	0.00	32.8	27.9											
2996A	1.009	34.709	4.76	2.26	125.	0.00	32.8	27.8											
3098A	1.000	34.715	4.78	2.21	124.	0.00	32.7	27.3											
3200A	0.979	34.707	4.80	2.33	125.	0.00	32.8	27.8											
3301A	0.920	34.705	4.81	2.33	127.	0.00	32.8	27.6											
3402A	0.91	34.704	4.83	2.32	123.	0.00	32.8	27.6											
3504A	0.892	34.703	4.85	2.28	124.	0.00	32.9	27.6											
3605A	0.818	34.699	4.90	2.22	125.	0.00	32.6	27.4											
3707A	0.655	34.692	4.94	2.29	127.	0.00	32.9	27.0											
3807A	0.563	34.688	5.02	2.28	126.	0.00	33.1	26.8											
3908A	0.505	34.686	5.09	2.30	129.	0.00	32.9	26.6											
4010A	0.496	34.683	5.02	2.29	129.	0.00	33.3	26.8											

INDOMED LEG XIII CTU									
12 S					12 D				
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	DD	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	DD
49 25.9S	50 31.5W	11/19/78	2300 GMT		49 26.0S	50 32.3W	11/19/78	1855 GMT	
Z	T	S	SIGMA T	DT	Z	T	S	SIGMA T	DT
0	7.564	34.047	26.611	143.6	0.000	0	7.642	34.044	26.598
10	7.574	34.046	26.609	143.8	0.014	10	7.190	34.049	26.666
20	6.781	34.044	26.718	133.5	0.028	20	6.171	34.061	26.812
30	5.831	34.080	26.870	119.1	0.041	30	5.213	34.072	26.938
40	5.237	34.062	26.927	113.6	0.053	40	4.960	34.068	26.964
50	5.092	34.076	26.955	111.0	0.064	50	4.798	34.084	26.995
75	4.684	34.086	27.009	105.9	0.091	75	4.445	34.092	27.040
100	4.115	34.090	27.074	99.8	0.117	100	4.056	34.091	27.081
125	3.849	34.108	27.115	95.8	0.142	125	3.743	34.105	27.124
150	3.616	34.122	27.150	92.6	0.166	150	3.631	34.126	27.151
175	3.547	34.134	27.166	91.0	0.189	175	3.499	34.127	27.165
200	3.428	34.129	27.173	90.3	0.212	200	3.325	34.123	27.178
225	3.348	34.133	27.184	89.3	0.235	225	3.236	34.126	27.189
250	3.109	34.119	27.195	88.2	0.257	250	3.017	34.120	27.204
275	2.901	34.112	27.208	87.0	0.280	275	2.621	34.087	27.213
300	2.487	34.080	27.219	86.0	0.302	300	2.270	34.060	27.221
350	2.180	34.071	27.237	84.3	0.345	350	2.095	34.061	27.235
400	2.513	34.138	27.263	81.8	0.387	400	2.382	34.111	27.252
450	2.422	34.161	27.289	79.4	0.429	450	2.513	34.167	27.286
500	2.343	34.177	27.308	77.5	0.469	500	2.362	34.183	27.311
550	2.245	34.206	27.339	74.6	0.509	550	2.253	34.217	27.347
600	2.301	34.258	27.376	71.1	0.546	600	2.331	34.254	27.370
650	2.406	34.301	27.402	68.7	0.583	650	2.444	34.299	27.397
700	2.486	34.329	27.417	67.2	0.619	700	2.446	34.337	27.427
750	2.533	34.378	27.452	63.8	0.653	750	2.468	34.382	27.461
800	2.538	34.413	27.480	61.2	0.687	800	2.488	34.416	27.487
850	2.499	34.441	27.506	58.8	0.719	850	2.516	34.443	27.506
900	2.449	34.469	27.532	56.3	0.750	900	2.428	34.464	27.530
950	2.404	34.490	27.553	54.3	0.780	950	2.385	34.494	27.557
1000	2.380	34.510	27.571	52.6	0.810	1000	2.376	34.515	27.575
1100	2.342	34.563	27.616	48.3	0.866	1100	2.341	34.552	27.607
1200	2.276	34.590	27.643	45.8	0.919	1200	2.275	34.594	27.646
1300	2.233	34.614	27.666	43.6	0.970	1300	2.223	34.619	27.671
1400	2.180	34.640	27.691	41.2	1.019	1400	2.160	34.643	27.695
1500	2.134	34.659	27.710	39.4	1.067	1500	2.116	34.668	27.718
1600	2.073	34.682	27.733	37.2	1.112	1600	2.088	34.677	27.728
1684	2.013	34.695	27.748	35.8	1.149	1700	2.025	34.691	27.744
						1800	1.958	34.699	27.756
						1900	1.899	34.706	27.766
						2000	1.783	34.713	27.781
						2100	1.755	34.716	27.785
						2200	1.691	34.717	27.791
						2300	1.499	34.720	27.807
						2400	1.389	34.720	27.815
						2500	1.347	34.718	27.817
						2600	1.292	34.717	27.820
						2700	1.268	34.717	27.821
						2800	1.214	34.717	27.825
						2900	1.001	34.710	27.834
						3000	1.002	34.710	27.834
						3100	0.994	34.708	27.833
						3200	0.958	34.706	27.833
						3300	0.966	34.707	27.834
						3400	0.913	34.703	27.834
						3500	0.897	34.702	27.834
						3600	0.851	34.701	27.836
						3700	0.689	34.692	27.839
						3800	0.593	34.689	27.843
						3900	0.533	34.686	27.844
						4000	0.480	34.683	27.845
						4021	0.480	34.684	27.845

RV MELVILLE

INDOURED LEG XIII

13

Z	T	S	U2	P04	SI03	NO2	NO3	DT	Z	I	S	O2	SIGT	UT	DD	DOMINANT WAVES	
																6	49
1	9.77	34.536	6.71	0.80	4.	0.11	9.2	140.0	0	9.77	34.536	6.71	26.649	140.0	0.000		
42	9.10	34.575	6.68	0.85	4.	0.12	9.6	126.6	10	9.63	34.549	6.70	26.682	136.9	0.014		
67	8.65	34.577	6.48	0.91	4.	0.17	11.4	119.7	20	9.47	34.560	6.70	26.717	135.5	0.027		
93	8.03	34.488	6.45	1.10	5.	0.15	13.8	117.3	30	9.30	34.570	6.69	26.751	130.3	0.041		
123	7.39	34.418	6.35	1.15	6.	0.04	16.3	113.6	50	8.97	34.583	6.61	26.816	124.1	0.066		
134	7.21	34.441	6.00	1.40	8.	0.07	16.6	109.5	75	8.46	34.553	6.47	26.873	118.7	0.097		
184	6.48	34.360	5.94	1.52	9.	0.05	21.6	106.1	100	7.86	34.467	6.44	26.897	116.5	0.127		
215	5.81	34.302	5.91	1.63	11.	0.21	22.7	102.2	125	7.88	34.421	6.35	26.930	113.4	0.156		
245	5.25	34.263	5.94	1.63	12.	0.02	24.8	98.7	150	7.24	34.439	6.04	26.965	110.0	0.184		
276	4.88	34.235	6.02	1.58	12.	0.04	25.4	96.8	200	6.12	34.328	5.92	27.028	104.1	0.239		
316	4.57	34.210	6.27						250	5.18	34.259	5.95	27.089	98.3	0.291		
355	4.12	34.183	6.36	1.65	15.	0.04	26.4	92.8	300	4.69	34.221	6.17	27.114	95.9	0.361		
406	3.86	34.175	6.40						300	3.88	34.176	6.40	27.165	91.0	0.438		
457	3.66	34.166	6.44						500	3.50	34.166	6.38	27.196	88.2	0.531		
533	3.58	34.166	6.30	1.93	19.	0.07	27.7	87.1	600	3.20	34.176	6.16	27.232	84.8	0.622		
608	3.18	34.177	6.14	2.03	23.	0.01	29.0	84.5	700	2.92	34.199	5.87	27.275	80.7	0.709		
709	2.90	34.200	5.84	2.08	28.	0.01	30.2	80.3	800	2.76	34.232	5.57	27.316	76.8	0.792		
809	2.75	34.235	5.54	1.98	35.	0.02	31.4	76.4	1000	2.72	34.358	4.72	27.419	67.0	0.946		
910	2.76	34.295	5.12	2.25	42.	0.00	32.1	72.0	1200	2.71	34.484	4.26	27.521	57.4	1.084		
1011	2.72	34.365	4.68	2.37	51.	0.01	33.4	66.4	1500	2.61	34.602	4.11	27.624	47.6	1.266		
1113	2.73	34.424	4.44	2.38	56.	0.01	33.6	62.0	1750	2.64	34.693	4.24	27.694	40.9	1.400		
1211A	2.71	34.490	4.24	2.31	65.	0.01	33.8	56.8	2000	2.65	34.757	4.57	27.745	36.1	1.525		
1316	2.66	34.531	4.18	2.36	68.	0.01	34.0	53.3	2250	2.57	34.787	4.72	27.775	33.2	1.694		
1414A	2.61	34.569	4.09	2.35	71.	0.00	33.4	50.0	2500	2.44	34.810	4.88	27.805	30.4	1.758		
1516A	2.61	34.607	4.11	2.05	76.	0.01	33.0	47.2	2750	2.22	34.805	4.94	27.819	29.1	1.867		
1619A	2.63	34.643	4.11	2.23	73.	0.01	32.4	44.6	3000	1.91	34.787	4.89	27.830	28.1	1.972		
1746A	2.64	34.692	4.24	2.18	73.	0.01	30.6	41.0	3250	1.94	34.747	4.73	27.826	28.5	2.072		
1873A	2.62	34.722	4.36	2.10	72.	0.00	30.6	38.6	3500	1.26	34.730	4.79	27.832	27.9	2.168		
2001A	2.65	34.758	4.57	1.78	69.	0.00	29.5	36.1	3750	1.01	34.715	4.81	27.837	27.4	2.258		
2129A	2.612	34.775	4.63	1.89	69.	0.00	28.8	34.5	4000	0.73	34.700	4.95	27.842	26.9	2.342		
2282A	2.560	34.790	4.74	1.95	69.	0.01	28.1	32.9	4250	0.49	34.688	5.13	27.848	26.4	2.419		
2435A	2.495	34.809	4.89	1.88	68.	0.00	27.5	30.9	4500	0.34	34.680	5.10	27.850	26.2	2.491		
2618A	2.334	34.808	4.87	1.85	73.	0.00	27.5	29.7	4750	0.28	34.675	5.14	27.849	26.2	2.559		
2793A	2.186	34.804	4.96	1.83	76.	0.00	27.4	28.9	5000	0.25	34.673	5.18	27.849	26.3	2.627		
2998A	1.909	34.787	4.89	1.96	66.	0.00	28.8	28.1	5250	0.25	34.671	5.21	27.848	26.4	2.694		
3203A	1.598	34.751	4.73	2.13	101.	0.03	29.9	28.6	5500	0.25	34.669	5.16	27.846	26.5	2.762		
3406A	1.349	34.734	4.78	2.18	110.	0.12	30.8	28.1									
3611A	1.157	34.724	4.80	2.29	116.	0.02	31.4	27.6									
3818A	0.933	34.710	4.82	2.25	121.	0.04	30.9	27.3									
4018A	0.716	34.698	4.94	2.31	126.	0.02	32.1	26.9									
4273A	0.471	34.687	5.14	2.33	131.	0.03	32.3	26.3									
4526A	0.329	34.679	5.09	2.37	133.	0.05	31.8	26.2									
4779A	0.275	34.674	5.15	2.35	133.	0.01	32.3	26.3									
5031A	0.247	34.672	5.18	2.31	133.	0.00	32.1	26.3									
5283A	0.245	34.670	5.21	2.37	133.	0.05	32.3	26.4									
5485A	0.254	34.669	5.16	2.35	133.	0.01	32.9	26.5									

13 S						INDOMED LEG XIII CTD						13 D							
LATITUDE 46 28.0S	LONGITUDE 41 57.6W	MN/DAY/YR 11/21/78	START TIME 1752 GMT	Z	T	S	SIGMA T	DT	DD	LATITUDE 46 28.0S	LONGITUDE 41 59.3W	MN/DAY/YR 11/21/78	START TIME 1233 GMT	Z	T	S	SIGMA T	DT	DD
0	9.632	34.548	26.681	136.9	0.000					0	9.573	34.547	26.690	136.1	0.000				
10	9.421	34.565	26.730	132.4	0.013					10	9.269	34.550	26.743	131.1	0.013				
20	9.245	34.561	26.755	129.9	0.027					20	9.236	34.567	26.761	129.3	0.026				
30	9.055	34.553	26.780	127.6	0.040					30	9.167	34.572	26.777	127.9	0.039				
40	9.040	34.572	26.797	125.9	0.052					40	8.939	34.565	26.808	124.9	0.052				
50	8.876	34.578	26.828	123.0	0.065					50	8.739	34.568	26.842	121.7	0.064				
75	8.475	34.562	26.878	118.2	0.095					75	8.582	34.565	26.864	119.6	0.095				
100	8.170	34.537	26.906	115.7	0.125					100	8.219	34.533	26.895	116.7	0.125				
125	7.488	34.455	26.942	112.2	0.154					125	7.577	34.437	26.915	114.8	0.154				
150	7.184	34.427	26.963	110.2	0.182					150	7.373	34.447	26.952	111.2	0.183				
175	6.643	34.374	26.996	107.1	0.210					175	6.570	34.360	26.995	107.2	0.211				
200	6.166	34.342	27.034	103.5	0.237					200	6.089	34.326	27.031	103.8	0.238				
225	5.569	34.291	27.068	100.2	0.263					225	5.551	34.280	27.062	100.9	0.264				
250	5.253	34.272	27.091	98.1	0.289					250	5.325	34.267	27.079	99.3	0.290				
275	4.971	34.251	27.108	96.5	0.314					275	5.042	34.249	27.098	97.5	0.315				
300	4.699	34.231	27.122	95.1	0.339					300	4.666	34.221	27.118	95.5	0.340				
350	4.183	34.194	27.149	92.6	0.387					350	4.197	34.190	27.144	93.0	0.389				
400	3.891	34.183	27.171	90.6	0.435					400	3.940	34.179	27.162	91.4	0.437				
450	3.671	34.176	27.187	89.0	0.481					450	3.705	34.171	27.180	89.7	0.484				
500	3.515	34.175	27.201	87.6	0.527					500	3.459	34.169	27.202	87.6	0.530				
550	3.301	34.173	27.220	85.9	0.573					550	3.248	34.171	27.224	85.5	0.575				
600	3.161	34.181	27.240	84.0	0.617					600	3.137	34.184	27.244	85.6	0.620				
650	3.059	34.199	27.263	81.8	0.661					650	2.985	34.194	27.266	81.5	0.663				
700	2.926	34.200	27.276	80.6	0.703					700	2.896	34.208	27.285	79.7	0.705				
750	2.887	34.215	27.292	79.1	0.745					750	2.837	34.229	27.307	77.6	0.747				
800	2.861	34.244	27.317	76.7	0.787					800	2.866	34.255	27.331	75.4	0.787				
850	2.793	34.268	27.342	74.3	0.827					850	2.789	34.279	27.351	75.4	0.827				
900	2.775	34.294	27.365	72.2	0.866					900	2.776	34.308	27.376	71.1	0.866				
950	2.764	34.321	27.387	70.0	0.905					950	2.752	34.341	27.404	68.4	0.903				
1000	2.731	34.350	27.413	67.6	0.942					1000	2.737	34.370	27.428	66.1	0.940				
1100	2.733	34.410	27.461	63.1	1.013					1100	2.734	34.429	27.476	61.6	1.010				
1200	2.683	34.469	27.512	58.2	1.081					1200	2.698	34.480	27.520	57.5	1.077				
1300	2.678	34.524	27.556	54.0	1.145					1300	2.672	34.525	27.558	53.9	1.140				
1325	2.682	34.540	27.569	52.8	1.160					1400	2.632	34.570	27.597	50.1	1.200				
										1500	2.621	34.608	27.628	47.2	1.257				
										1600	2.631	34.642	27.655	46.7	1.312				
										1700	2.655	34.683	27.685	41.8	1.366				
										1800	2.638	34.705	27.704	40.0	1.417				
										1900	2.658	34.734	27.726	38.0	1.467				
										2000	2.664	34.758	27.744	36.2	1.516				
										2100	2.654	34.772	27.756	35.0	1.565				
										2200	2.612	34.780	27.766	34.1	1.612				
										2300	2.564	34.790	27.778	32.9	1.659				
										2400	2.538	34.803	27.791	31.8	1.705				
										2500	2.467	34.810	27.803	30.6	1.751				
										2600	2.352	34.802	27.806	30.3	1.795				
										2700	2.286	34.807	27.816	29.4	1.839				
										2800	2.192	34.801	27.819	29.1	1.883				
										2900	2.061	34.793	27.823	28.7	1.925				
										3000	1.901	34.780	27.825	28.5	1.967				
										3100	1.739	34.764	27.825	28.6	2.008				
										3200	1.605	34.751	27.824	28.6	2.048				
										3300	1.468	34.741	27.826	28.4	2.087				
										3400	1.377	34.735	27.828	28.3	2.126				
										3500	1.274	34.729	27.831	28.0	2.164				
										3600	1.170	34.723	27.833	27.8	2.201				
										3700	1.075	34.718	27.835	27.6	2.237				
										3800	0.956	34.710	27.837	27.4	2.272				
										3900	0.862	34.704	27.838	27.3	2.306				
										4000	0.755	34.698	27.840	27.1	2.339				
										4100	0.635	34.692	27.842	26.9	2.371				
										4200	0.536	34.687	27.845	26.7	2.402				
										4300	0.465	34.683	27.846	26.6	2.432				
										4400	0.387	34.679	27.847	26.5	2.461				
										4500	0.336	34.676	27.847	26.5	2.489				
										4600	0.317	34.675	27.848	26.4	2.517				
										4700	0.293	34.672	27.847	26.3	2.545				
										4800	0.275	34.670	27.846	26.6	2.572				
										4900	0.259	34.669	27.846	26.6	2.600				
										5000	0.250	34.667	27.845	26.7	2.627				
										5100	0.248	34.666	27.844	26.7	2.654				
										5200	0.245	34.666	27.844	26.7	2.682				
										5300	0.247	34.664	27.843	26.9	2.709				
										5400	0.249	34.663	27.842	27.0	2.736				
										5500	0.250	34.662	27.841	27.0	2.764				

RV MELVILLE

INOUNED LEG XIII

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
47 14.7S	41 00.4W	11/22/78	0300 0707	GMT	5964M	19U	18KT	1							
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	S107	DT	DD
1	9.38	34.530	6.72	0.73	3.	0.16	8.4	134.3	0	9.38	34.530	6.72	26.709	134.3	0.000
42	9.31	34.568	6.55	0.84	3.	0.19	9.5	130.4	10	9.37	34.531	6.68	26.712	134.0	0.013
72	9.25	34.654	6.45	0.87	4.	0.28	10.2	123.1	20	9.35	34.537	6.64	26.719	133.4	0.027
103	9.13	34.637	6.36	0.88	5.	0.29	10.7	122.5	30	9.33	34.548	6.60	26.730	132.3	0.040
133	9.05	34.633	6.49	0.89	4.	0.21	10.4	121.6	50	9.30	34.595	6.52	26.772	128.3	0.066
174	8.91	34.658	6.25	0.96	5.	0.24	13.0	119.1	75	9.24	34.653	6.44	26.628	123.0	0.098
215	7.62	34.492	5.99	1.33	7.	0.03	19.1	111.3	100	9.14	34.640	6.36	26.633	122.6	0.129
256	6.34	34.353	5.89	1.56	10.	0.02	22.9	104.9	125	9.07	34.634	6.46	26.840	121.9	0.160
306	5.37	34.269	5.95	1.70	12.	0.01	25.3	99.6	150	8.99	34.631	6.42	26.850	121.0	0.191
357	4.62	34.212	6.22	1.78	14.	0.01	26.1	95.7	200	8.16	34.553	6.08	26.719	114.3	0.251
408	4.29	34.196	6.37	1.78	15.	0.01	26.4	93.5	250	6.51	34.372	5.90	27.011	105.7	0.308
459	4.06	34.186	6.41	1.84	15.	0.00	26.6	92.0	300	5.46	34.277	5.94	27.070	100.1	0.362
510	3.862	34.184	6.31	1.87	18.	0.00	27.3	90.2	400	4.52	34.198	6.35	27.136	93.8	0.462
562	3.676	34.183	6.29	1.90	19.	0.00	28.1	88.5	500	3.90	34.185	6.53	27.170	90.6	0.559
637	3.305	34.170	6.28	1.94	22.	0.01	28.7	86.1	600	3.49	34.177	6.28	27.205	87.3	0.652
714	3.066	34.181	6.10	2.01	26.	0.00	29.3	83.2	700	3.10	34.178	6.14	27.292	83.8	0.742
815	2.825	34.225	5.81	2.05	31.	0.02	30.3	77.8	800	2.85	34.218	5.86	27.297	78.6	0.828
943	2.753	34.279	5.21	2.24	43.	0.00	32.9	73.1	1000	2.73	34.312	4.98	27.382	70.5	0.988
1069	2.721	34.354	4.74	2.35	52.	0.00	34.1	67.2	1200	2.72	34.438	4.42	27.484	60.8	1.132
1176A	2.72	34.424	4.46	2.43	59.	0.00	34.1	61.9	1500	2.69	34.582	4.19	27.600	49.8	1.323
1373	2.690	34.524	4.23	2.38	66.	0.00	34.4	54.1	1750	2.63	34.664	4.19	27.672	43.0	1.463
1476A	2.69	34.570	4.20	2.35	68.	0.00	33.5	50.6	2000	2.61	34.724	4.44	27.721	38.4	1.593
1625A	2.71	34.633	4.18	2.29	69.	0.00	32.8	46.0	2250	2.59	34.782	4.74	27.770	33.7	1.715
1774A	2.61	34.659	4.19	2.20	72.	0.00	32.4	42.5	2500	2.57	34.816	5.01	27.800	30.9	1.831
1923A	2.66	34.711	4.41	2.14	70.	0.00	31.1	39.7	2750	2.53	34.810	5.00	27.814	29.5	1.944
2074A	2.56	34.755	4.46	2.15	72.	0.00	30.8	37.1	3000	2.05	34.788	4.88	27.819	29.1	2.033
2223A	2.56	34.772	4.67	2.16	69.	0.00	29.2	34.3	3250	1.68	34.753	4.76	27.820	29.0	2.157
2397A	2.69	34.825	5.05	1.87	58.	0.00	26.6	31.4	3500	1.44	34.781	4.82	27.827	28.3	2.258
2573A	2.46	34.807	4.95	1.92	67.	0.00	27.6	30.8	3750	1.19	34.724	4.86	27.831	27.9	2.353
2771A	2.32	34.811	5.01	1.87	69.	0.00	27.5	29.4	4000	0.96	34.710	4.88	27.836	27.5	2.443
2971A	2.10	34.793	4.89	1.91	77.	0.01	28.4	29.0	4250	0.71	34.695	4.96	27.839	27.2	2.527
3169A	1.788	34.760	4.80	2.11	92.	0.01	30.1	29.2	4500	0.52	34.684	5.06	27.882	26.9	2.606
3368A	1.554	34.745	4.74	2.14	101.	0.01	31.0	28.7	4750	0.39	34.680	5.12	27.887	26.5	2.680
3567A	1.388	34.737	4.86	2.16	105.	0.00	31.0	28.2	5000	0.32	34.674	5.18	27.846	26.6	2.751
3766A	1.177	34.722	4.86	2.19	111.	0.01	31.6	27.9	5250	0.28	34.670	5.21	27.845	26.7	2.821
3965A	0.992	34.712	4.87	2.23	116.	0.01	32.0	27.5	5500	0.28	34.671	5.22	27.846	26.5	2.890
4214A	0.744	34.696	4.94	2.26	121.	0.01	32.4	27.2	5750	0.28	34.667	5.24	27.842	26.9	2.959
4463A	0.544	34.686	5.05	2.30	124.	0.01	32.9	27.0							
4710A	0.409	34.681	5.11	2.32	127.	0.00	32.9	26.5							
4959A	0.329	34.674	5.260	2.32	128.	0.00	32.6	26.5							
5206A	0.288	34.669	5.21	2.32	129.	0.00	32.9	26.7							
5453A	0.274	34.671	5.21	2.33	130.	0.00	32.8	26.5							
5700A	0.282	34.667	5.26	2.35	130.	0.00	33.0	26.8							
5946A	0.291	34.663	5.15	2.34	130.	0.02	33.0	27.2							

RV MELVILLE

INOUNED LEG XIII

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
47 57.4S	41 06.3W	11/22/78	1415 1741	GMT	5993M	220	16KT	1	220 3 4						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	S107	DT	DD
1	7.96	34.218	7.01	1.02	1.	0.17	12.1	136.4	0	7.96	34.22	7.01	26.687	136.4	0.000
42	9.12	34.551	6.82	0.82	2.	0.17	9.1	126.7	10	8.36	34.332	6.92	26.709	134.3	0.014
72	8.92	34.547	6.49	0.91	2.	0.21	10.3	126.0	20	8.70	34.442	6.82	26.731	132.3	0.027
103	7.30	34.309	6.69	1.17	3.	0.17	14.3	120.5	30	8.95	34.449	6.78	26.749	130.5	0.040
133	7.28	34.398	6.21	1.33	6.	0.11	17.6	113.6	50	9.07	34.555	6.59	26.775	128.0	0.066
174	5.40	34.202	6.36	1.62	8.	0.10	22.2	105.0	75	8.76	34.52	6.52	26.801	125.5	0.098
215	4.78	34.184	6.48	1.70	10.	0.20	23.1	100.5	100	7.45	34.33	6.68	26.848	121.2	0.129
256	4.78	34.224	6.17	1.78	10.	0.01	24.9	96.5	125	7.29	34.37	6.35	26.907	115.5	0.159
306	4.34	34.195	6.30	1.82	12.	0.01	25.4	94.1	150	6.55	34.332	6.27	26.968	109.7	0.188
357	3.92	34.172	6.11	1.88	13.	0.01	26.3	91.7	200	4.96	34.18	6.46	27.052	101.8	0.242
408	3.68	34.165	6.40	1.89	15.	0.01	26.5	89.9	250	4.79	34.22	6.22	27.102	97.0	0.293
459	3.50	34.169	6.31	1.94	17.	0.01	27.3	88.0	300	4.40	34.20	6.26	27.131	94.3	0.342
510	3.33	34.170	6.23	1.98	20.	0.01	27.7	86.3	400	3.71	34.17	6.40	27.175	90.2	0.438
561	3.19	34.172	6.12	2.02	22.	0.00	28.2	84.9	500	3.36	34.17	6.25	27.212	86.6	0.529
637	2.91	34.191	5.90	2.10	28.	0.00	29.5	81.1	600	3.04	34.18	6.02	27.250	85.1	0.618
714	2.80	34.224	5.60	2.17	33.	0.00	30.9	77.7	700	2.81	34.22	5.66	27.300	78.3	0.703
815	2.74	34.279	5.20	2.28	41.	0.00	32.2	73.0	800	2.74	34.27	5.26	27.348	73.7	0.783
943	2.80	34.364	4.75	2.35	50.	0.00	33.0	67.1	1000	2.74	34.40	4.59	27.448	64.2	0.932
1069	2.64	34.429	4.42	2.38	60.	0.00	33.8	60.9	1200	2.53	34.49	4.22	27.541	55.5	1.064
1227A	2.51	34.50	4.19	2.43	69.	0.00	34.0	54.4	1500	2.45	34.63	4.11	27.662	44.0	1.237
1374	2.44	34.575	4.05	2.42	76.	0.00	34.2	48.2	1750	2.35</td					

LATITUDE LONGITUDE
47 15.1S 41 49.5W

M/DAY/YR START TIME
11/22/78 0622 GMT

Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	9.370	34.541	26.719	133.3	0.000	0	8.153	34.263	26.694	135.8	0.000
10	9.379	34.558	26.715	133.7	0.013	10	8.121	34.264	26.699	135.2	0.014
20	9.383	34.538	26.715	133.8	0.027	20	8.278	34.309	26.711	134.2	0.027
30	9.320	34.563	26.745	130.9	0.040	30	8.658	34.463	26.726	132.7	0.040
40	9.199	34.646	26.780	127.6	0.053	40	9.180	34.565	26.769	128.6	0.054
50	9.059	34.646	26.786	126.9	0.066	50	9.153	34.572	26.779	127.7	0.066
75	9.167	34.646	26.834	122.4	0.097	75	8.064	34.381	26.799	125.7	0.098
100	9.106	34.638	26.838	122.1	0.128	100	7.492	34.361	26.868	119.5	0.129
125	9.034	34.631	26.844	121.5	0.159	125	7.525	34.424	26.913	115.0	0.159
150	9.070	34.644	26.849	121.1	0.190	150	6.293	34.287	26.974	109.2	0.188
175	8.892	34.632	26.868	119.3	0.221	175	5.446	34.209	27.019	105.0	0.215
200	8.272	34.575	26.920	114.3	0.251	200	4.951	34.186	27.058	101.2	0.211
225	7.976	34.475	26.960	110.6	0.280	225	4.876	34.201	27.079	99.3	0.267
250	6.707	34.388	26.999	106.9	0.308	250	4.852	34.228	27.103	97.0	0.292
275	6.051	34.324	27.034	103.5	0.336	275	4.668	34.222	27.119	95.5	0.317
300	5.567	34.287	27.065	100.5	0.362	300	4.498	34.238	27.126	94.7	0.391
350	4.789	34.227	27.110	96.3	0.413	350	4.048	34.180	27.152	92.3	0.390
400	4.353	34.200	27.136	93.9	0.463	400	3.747	34.174	27.178	89.9	0.437
450	4.087	34.190	27.156	92.0	0.511	450	3.556	34.171	27.194	88.5	0.483
500	3.902	34.188	27.173	90.3	0.559	500	3.358	34.174	27.216	86.3	0.529
550	3.702	34.188	27.193	88.4	0.606	550	3.201	34.178	27.234	84.6	0.573
600	3.529	34.186	27.209	86.9	0.652	600	3.050	34.184	27.252	82.8	0.617
650	3.311	34.182	27.227	85.3	0.697	650	2.879	34.202	27.282	80.0	0.660
700	3.105	34.182	27.246	83.4	0.742	700	2.802	34.224	27.306	77.7	0.701
750	2.962	34.196	27.270	81.2	0.785	750	2.768	34.246	27.327	75.7	0.762
800	2.844	34.210	27.292	79.1	0.828	800	2.754	34.278	27.354	73.2	0.781
850	2.750	34.228	27.314	76.9	0.869	850	2.771	34.318	27.384	70.3	0.820
900	2.786	34.263	27.339	74.6	0.909	900	2.805	34.349	27.406	68.3	0.857
950	2.765	34.294	27.365	72.1	0.949	950	2.809	34.379	27.429	66.0	0.893
1000	2.736	34.320	27.389	69.9	0.987	1000	2.676	34.394	27.453	63.8	0.929
1100	2.728	34.363	27.440	65.1	1.061	1100	2.620	34.445	27.498	59.5	0.996
1200	2.744	34.445	27.488	60.5	1.131	1200	2.483	34.484	27.541	55.4	1.060
1300	2.705	34.498	27.533	56.2	1.197	1300	2.501	34.531	27.577	52.0	1.121
1376	2.694	34.532	27.561	53.5	1.244	1379	2.429	34.562	27.608	49.1	1.167

RV MELVILLE

INCOMING LEG XIII

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Z	T	S	02	POW	SIOS	NO2	NO3	DT	INCOMING LEG XIII							
									MESSENDER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
LATITUDE	LONGITUDE	MO/DAY/YR	0009	0419	GMT	5634M	290	16KT	1	SIGT	OT	DD				
48° 38.9S	41° 02.3W	11/25/76														
1	5.15	33.889	7.74	1.32	6.	0.22	19.3	125.7	0	5.15	33.889	7.74	26.801	125.7	0.000	
42	4.00	33.939	7.63	1.52	9.	0.21	21.5	110.0	10	4.87	33.900	7.72	26.847	121.3	0.012	
66	3.49	33.930	7.53	1.65	12.	0.21	22.7	105.9	20	4.57	33.923	7.70	26.891	117.0	0.024	
92	3.29	33.927	7.31	1.63	12.	0.22	23.1	104.3	30	4.50	33.934	7.67	26.929	115.5	0.036	
121	2.24	33.931	7.66	1.78	18.	0.45	29.1	95.4	50	3.81	33.939	7.60	26.904	108.3	0.058	
152	1.72	33.941	7.66	1.86	20.	0.16	26.6	90.8	75	3.44	33.930	7.43	27.013	105.5	0.085	
181	2.05	34.010	7.42	1.84	18.	0.04	26.3	86.0	100	3.02	33.927	7.39	27.050	102.0	0.111	
211	1.70	33.998	7.33	1.88	19.	0.02	27.2	86.4	125	2.15	33.932	7.66	27.120	94.6	0.136	
241	1.53	34.000	7.29	1.93	23.	0.02	27.9	85.1	150	1.73	33.941	7.65	27.166	91.0	0.159	
271	1.45	34.002	6.91	2.01	27.	0.02	29.3	81.3	200	1.86	34.007	7.35	27.210	86.9	0.204	
311	1.59	34.119	6.37	2.10	33.	0.02	31.1	76.4	250	1.49	34.011	7.19	27.239	81.1	0.247	
350	1.50	34.159	6.03	2.20	39.	0.02	32.1	72.8	300	1.55	34.100	6.51	27.306	77.7	0.288	
400	1.643	34.229	5.55	2.30	47.	0.02	35.4	68.4	400	1.64	34.229	5.55	27.404	68.4	0.362	
450	1.896	34.314	5.04	2.38	54.	0.01	34.2	63.8	500	2.10	34.367	6.71	27.479	61.3	0.428	
524	2.170	34.385	4.60	2.41	61.	0.01	34.9	60.5	600	2.22	34.437	4.33	27.525	56.9	0.490	
599	2.221	34.436	4.33	2.43	68.	0.01	35.2	57.0	700	2.15	34.487	4.23	27.571	52.6	0.548	
700	2.151	34.467	4.23	2.45	72.	0.01	35.2	52.6	800	2.24	34.557	4.05	27.619	48.0	0.602	
799	2.240	34.556	4.05	2.43	79.	0.02	35.3	48.1	1000	2.24	34.623	4.01	27.671	43.1	0.702	
901	2.253	34.591	4.04	2.43	82.	0.01	34.9	45.5	1200	2.19	34.660	4.07	27.706	39.8	0.797	
1003	2.241	34.623	4.01	2.38	82.	0.01	34.5	43.0	1500	2.08	34.715	4.25	27.758	34.9	0.928	
1106	2.160	34.639	4.09	2.37	86.	0.00	34.2	41.2	1750	1.84	34.718	4.19	27.780	32.9	1.031	
1217A	2.19 K	34.663	4.06	2.34	88.	0.00		39.6	2000	1.60	34.718	4.40	27.790	31.0	1.129	
1315	2.07	34.673	4.07	2.31	90.	0.00	33.6	37.9	2250	1.61	34.750	4.64	27.823	28.7	1.225	
1421A	2.03	34.691	4.09	2.30	95.	0.00	32.5	36.2	2500	1.36	34.739	4.64	27.828	28.2	1.314	
1522A	2.10	34.721	4.30	2.23	91.	0.00	31.3	34.5	2750	1.18	34.721	4.71	27.830	20.1	1.402	
1625A	2.09	34.735	4.45	2.18	91.	0.00	30.9	33.4	3000	1.02	34.716	4.79	27.837	27.4	1.488	
1751A	1.84	34.717	4.19	2.21	100.	0.00	31.6	32.9	3250	0.80	34.706	4.87	27.843	26.8	1.570	
1878A	1.72	34.716	4.34	2.25	103.	0.01	31.8	32.1	3500	0.61	34.694	4.95	27.845	26.7	1.648	
2005A	1.60	34.719	4.40	2.26	107.	0.00	31.6	31.0	3750	0.46	34.688	5.04	27.849	26.3	1.722	
2133A	1.56	34.739	4.49	2.21	107.	0.00	31.6	29.2	4000	0.33	34.681	5.10	27.851	26.1	1.792	
2264A	1.62	34.752	4.70	2.12	99.	0.00	30.2	28.6	4250	0.25	34.678	5.17	27.853	25.9	1.859	
2336A	1.42	34.738	4.63	2.18	106.	0.01	30.7	28.3	4500	0.21	34.675	5.20	27.853	25.9	1.925	
2615A	1.26	34.726	4.67	2.20	112.	0.01	31.3	28.2	4750	0.20	34.672	5.24	27.851	26.1	1.990	
2793A	1.16	34.719	4.73	2.20	115.	0.01	31.4	28.0	5000	0.20	34.671	5.24	27.850	26.2	2.056	
2996A	1.02	34.716	4.79	2.23	118.	0.01	31.9	27.4	5250	0.21	34.666	5.23	27.846	26.6	2.122	
3199A	0.856	34.710	4.84	2.24	119.	0.01	30.8	26.8	5500	0.24	34.669	5.30	27.847	26.5	2.189	
3601A	0.662	34.695	4.98	2.26	123.	0.01	32.2	26.8								
3605A	0.566	34.692	4.97	2.27	124.	0.00	32.3	26.5								
3807A	0.422	34.685	5.07	2.30	126.	0.01	32.4	26.2								
4010A	0.323	34.680	5.10	2.31	128.	0.01	32.6	26.1								
4263A	0.245	34.677	5.17	2.35	128.	0.01	32.6	25.9								
4516A	0.209	34.674	5.20	2.32	129.	0.00	32.4	25.9								
4778A	0.202	34.671	5.24	2.33	129.	0.00	32.6	26.1								
5022A	0.195	34.670	5.24	2.31	130.	0.00	32.6	26.2								
5275A	0.209	34.665	5.23	2.31	129.	0.00	32.7	26.6								
5477A	0.24	34.669	5.29	2.32	130.	0.00	32.8	26.5								

17 S						INDOMED LEG XIII CTD						17 N							
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	Z	T	S	SIGMA T	DT	DU	Z	T	S	SIGMA T	DT	DU
48 40.1S	41 21.4W	12/23/78	0315 GMT	48 38.9S	41 22.3W	11/22/78	2340 GMT	0	5.149	33.893	26.804	125.3	0.000	0	5.191	33.898	26.803	125.4	0.000
10	5.137	33.894	26.806	125.1	0.013	10	5.187	33.902	26.807	125.1	0.013	10	5.003	33.895	26.822	123.6	0.025		
20	4.166	33.902	26.943	112.1	0.024	20	4.003	33.895	26.900	116.2	0.057	20	4.419	33.912	26.976	109.1	0.060		
30	3.944	33.946	26.977	108.9	0.035	30	4.095	33.927	26.946	111.8	0.048	30	3.649	33.951	27.010	105.4	0.086		
40	3.832	33.955	26.995	107.2	0.046	40	3.919	33.941	26.976	109.1	0.060	40	3.412	33.936	27.021	105.4	0.086		
50	3.649	33.951	27.010	105.8	0.057	50	3.935	33.936	27.014	105.4	0.086	50	3.109	33.930	27.045	102.5	0.113		
75	3.412	33.936	27.021	104.7	0.063	75	3.491	33.936	27.036	103.3	0.113	75	2.818	33.939	27.159	91.7	0.147		
100	3.109	33.930	27.045	102.5	0.109	100	3.262	33.937	27.158	91.8	0.147	100	2.852	33.991	27.200	87.8	0.160		
125	2.818	33.939	27.159	91.7	0.134	125	1.829	33.939	27.196	88.1	0.160	125	2.431	34.046	27.209	86.9	0.182		
150	1.829	33.944	27.184	89.3	0.157	150	2.431	34.046	27.221	85.8	0.204	150	1.529	33.944	27.184	89.3	0.157		
175	1.832	33.991	27.200	87.8	0.179	175	2.042	34.025	27.243	83.7	0.225	175	1.393	33.985	27.226	85.3	0.246		
200	1.472	33.977	27.214	86.4	0.201	200	1.838	34.018	27.255	82.6	0.267	200	1.324	34.001	27.244	83.6	0.287		
225	1.393	33.985	27.226	85.3	0.222	225	1.833	34.045	27.285	79.7	0.325	225	1.317	34.037	27.273	80.8	0.325		
250	1.324	34.001	27.244	83.6	0.244	250	1.935	34.070	27.306	77.7	0.325	250	1.283	34.072	27.304	78.0	0.325		
275	1.317	34.037	27.273	80.8	0.264	275	1.993	34.113	27.346	73.9	0.325	275	1.578	34.161	27.354	73.2	0.325		
300	1.283	34.072	27.304	78.0	0.284	300	1.846	34.126	27.386	75.0	0.325	300	1.640	34.236	27.410	67.9	0.361		
350	1.578	34.161	27.354	73.2	0.322	350	1.473	34.142	27.392	69.6	0.396	350	1.862	34.306	27.449	64.2	0.428		
400	1.640	34.236	27.410	67.9	0.358	400	1.567	34.207	27.442	64.9	0.460	400	2.006	34.357	27.479	61.4	0.424		
450	1.862	34.306	27.449	64.2	0.392	450	1.991	34.309	27.442	64.9	0.396	450	2.103	34.406	27.510	58.4	0.456		
500	2.006	34.357	27.479	61.4	0.424	500	2.189	34.372	27.476	61.6	0.428	500	2.203	34.576	27.638	46.3	0.621		
550	2.103	34.406	27.510	58.4	0.456	550	2.134	34.393	27.497	59.6	0.460	550	2.204	34.549	27.536	55.9	0.485		
600	2.203	34.576	27.638	46.3	0.621	600	2.140	34.427	27.524	57.1	0.490	600	2.149	34.670	27.556	53.9	0.514		
650	2.149	34.670	27.556	53.9	0.514	650	2.178	34.458	27.546	55.0	0.520	650	2.152	34.698	27.580	51.8	0.592		
700	2.152	34.698	27.580	51.8	0.592	700	2.150	34.483	27.568	52.9	0.549	700	2.231	34.537	27.605	49.4	0.570		
750	2.231	34.537	27.605	49.4	0.570	750	2.182	34.518	27.593	50.5	0.576	750	2.238	34.564	27.626	47.4	0.596		
800	2.238	34.564	27.626	47.4	0.596	800	2.288	34.552	27.612	48.7	0.603	800	2.203	34.576	27.638	46.3	0.621		
850	2.203	34.576	27.638	46.3	0.621	850	2.238	34.560	27.622	47.7	0.629	850	2.242	34.598	27.652	44.9	0.646		
900	2.242	34.598	27.652	44.9	0.646	900	2.253	34.587	27.643	45.8	0.655	900	2.231	34.613	27.665	43.7	0.671		
950	2.231	34.613	27.665	43.7	0.671	950	2.251	34.597	27.651	45.0	0.680	950	2.234	34.626	27.675	42.7	0.695		
1000	2.234	34.626	27.675	42.7	0.695	1000	2.247	34.619	27.669	43.3	0.704	1000	2.171	34.637	27.689	41.4	0.752		
1100	2.165	34.641	27.695	41.0	0.742	1100	2.171	34.671	27.709	39.5	0.798	1100	2.085	34.671	27.723	38.2	0.843		
1200	2.129	34.659	27.710	39.4	0.768	1200	2.131	34.658	27.709	39.5	0.798	1200	2.070	34.677	27.729	37.6	0.832		
1300	2.070	34.677	27.729	37.6	0.832	1300	2.085	34.671	27.723	38.2	0.843	1300	2.068	34.679	27.731	37.4	0.839		
1316	2.068	34.679	27.731	37.4	0.839	1316	2.056	34.692	27.742	36.4	0.887	1316	2.028	34.741	27.784	32.4	1.011		
1400	2.028	34.741	27.784	32.4	1.011	1400	1.791	34.716	27.782	32.6	1.051	1400	1.709	34.719	27.791	31.8	1.091		
1500	1.791	34.716	27.782	32.6	1.051	1500	1.635	34.720	27.797	31.2	1.130	1500	1.565	34.721	27.803	30.6	1.168		
1600	1.635	34.720	27.797	31.2	1.130	1600	1.696	34.752	27.818	29.2	1.206	1600	1.608	34.750	27.823	28.7	1.243		
1700	1.696	34.752	27.818	29.2	1.206	1700	1.506	34.738	27.828	28.2	1.316	1700	1.506	34.728	27.828	28.3	1.352		
1800	1.506	34.728	27.828	28.3	1.352	1800	1.709	34.719	27.791	31.8	1.557	1800	1.635	34.720	27.797	31.2	1.591		
1900	1.709	34.719	27.791	31.8	1.591	1900	1.635	34.720	27.797	31.2	1.591	1900	0.697	34.698	27.844	26.8	1.620		
2000	1.635	34.720	27.797	31.2	1.591	2000	0.620	34.694	27.845	26.6	1.651	2000	0.577	34.692	27.846	26.5	1.681		
2100	0.620	34.692	27.846	26.5	1.681	2100	0.528	34.690	27.847	26.4	1.711	2100	0.426	34.685	27.849	26.2	1.740		
2200	0.528	34.690	27.847	26.4	1.711	2200	0.381	34.681	27.849	26.3	1.768	2200	0.324	34.680	27.851	26.1	1.796		
2300	0.381	34.681	27.849	26.3	1.768	2300	0.290	34.678	27.851	26.0	1.825	2300	0.267	34.675	27.850	26.1	1.850		
2400	0.290	34.678	27.851	26.0	1.825	2400	0.165	34.672	27.852	27.8	1.422	2400	0.095	34.671	27.834	27.7	1.457		
2500	0.165	34.672	27.852	27.8	1.422	2500	0.008	34.714	27.837	27.5	1.490	2500	0.946	34.712	27.839	27.2	1.524		
2600	0.008	34.712	27.839	27.2	1.524	2600	0.874	34.709	27.841	27.0	1.557	2600	0.805	34.706	27.843	26.8	1.589		
2700	0.874	34.709	27.841	27.0	1.557	2700	0.697	34.698	27.844	26.8	1.620	2700	0.620	34.694	27.845	26.6	1.651		
2800	0.697	34.698	27.844	26.8	1.620	2800	0.577	34.675	27.852	26.5	1.681	2800	0.426	34.685	27.849	26.2	1.740		
2900	0.577	34.675	27.852	26.5	1.681	2900	0.381	34.681	27.849	26.3	1.768	2900	0.324	34.680	27.851	26.1	1.796		
3000	0.381	34.681	27.849	26.3	1.768	3000	0.290	34.678	27.851	26.0	1.825	3000	0.267	34.675	27.850	26.1	1.850		
3100	0.290	34.678	27.851	26.0	1.825	3100	0.249	34.675	27.851	26.0	1.877	3100	0.232	34.673	27.851	26.1	1.904		
3200	0.249	34.675	27.851	26.0	1.877	3200	0.219	34.671	27.850	26.2	1.930	3200	0.207	34.670	27.850	26.2	1.957		
3300	0.219	34.670	27.850	26.2	1.957	3300	0.201	34.668	27.848	26.3	1.983	3300	0.200	34.667	27.848	26.4	2.009		
3400	0.201	34.668	27.848	26.3	1.983	3400	0.192	34.666	27.847	26.4	2.036	3400	0.192	34.665	27.846	26.5	2.062		
3500	0.192	34.666	27.847	26.4	2.036	3500	0.199	34.664	27.845	26.6	2.089	3500	0.205	34.664	27.845	26.7	2.116		
3600	0.199	34.664	27.845	26.6	2.089	3600	0.210	34.662	27.843	26.8	2.142	3600	0.222	34.661	27.842	27.0	2.169		
3																			

RV MELVILLE

INHOMED LEG XIII

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DUMINANT WAVES						
49 08. S	41 01. W	11/23/78	1058 1446	GMT	5207M	29U	23KT	2	290 5 5						
4	T	S	O2	P04	S103	N02	N03	DT	4	I	S	O2	SIGT	DT	DD
0	5.28	34.011	7.78	1.24	2.	0.18	17.7	117.9	0	5.28	34.011	7.78	26.882	117.9	0.000
42	4.40	34.023	7.42	1.55	8.	0.17	21.6	107.6	10	5.09	34.008	7.70	26.901	116.1	0.012
67	3.78	34.067	7.18	1.68	11.	0.67	23.4	98.3	20	4.89	34.009	7.62	26.925	113.9	0.023
93	3.43	34.114	7.01	1.78	13.	0.03	25.6	91.5	30	4.67	34.013	7.53	26.952	111.3	0.035
123	3.28	34.126	6.78	1.82	13.	0.02	26.5	89.2	50	4.19	34.036	7.34	27.022	104.6	0.056
154	3.00	34.119	6.76	1.89	17.	0.00	27.2	87.3	75	3.65	34.084	7.12	27.116	95.8	0.081
184	2.29	34.065	7.12	1.87	18.	0.00	26.9	85.6	100	3.59	34.121	6.95	27.170	90.6	0.105
214	2.16	34.070	7.00	1.96	19.	0.00	27.8	84.2	125	3.27	34.128	6.78	27.186	89.1	0.127
244	2.52	34.125	6.52	2.01	23.	0.00	28.6	82.9	150	3.05	34.123	6.76	27.203	87.5	0.150
275	2.57	34.149	6.32	2.06	26.	0.00	29.1	81.5	200	2.22	34.069	7.06	27.231	84.9	0.193
316	2.50	34.169	6.09	2.09	30.	0.00	30.3	79.4	250	2.53	34.131	6.47	27.255	82.6	0.236
356	2.27	34.179	5.99	2.15	33.	0.00	30.8	76.8	300	2.53	34.162	6.17	27.280	80.2	0.277
407	2.00	34.201	5.78	2.24	39.	0.01	31.9	73.1	400	2.02	34.196	5.83	27.349	75.7	0.356
458	2.43	34.305	5.00	2.33	49.	0.00	35.6	68.5	500	2.42	34.338	4.77	27.429	66.0	0.428
534	2.42	34.361	4.70	2.39	56.	0.00	34.2	64.2	600	2.47	34.425	4.40	27.495	59.8	0.494
611	2.47	34.434	4.36	2.43	59.	0.00	34.8	59.1	700	2.29	34.476	4.21	27.551	54.5	0.554
712	2.26	34.480	4.20	2.46	72.	0.00	35.3	54.0	800	2.29	34.537	4.04	27.600	49.9	0.610
812	2.29	34.544	4.03	2.45	77.	0.00	34.9	49.4	1000	2.43	34.634	4.10	27.664	43.6	0.714
913	2.35	34.629	4.16	2.30	72.	0.00	33.1	45.0	1200	2.45	34.710	4.31	27.723	38.1	0.808
936A	2.61	34.642	4.18	2.30	70.	0.00	32.7	44.5	1500	2.26	34.750	4.49	27.772	33.5	0.938
1013	2.37	34.630	4.08	2.32	79.	0.00	33.7	43.5	1750	2.09	34.769	4.63	27.801	30.8	1.039
1139A	2.20	34.652	4.04	2.38	86.	0.00	34.0	40.5	2000	1.92	34.771	4.72	27.816	29.4	1.136
1241A	2.61	34.746	4.49	2.08	60.	0.00	30.2	36.6	2250	1.62	34.756	4.75	27.827	28.3	1.229
1343A	2.45	34.745	4.44	2.07	74.	0.01	30.6	35.3	2500	1.31	34.738	4.74	27.834	27.7	1.318
1470A	2.29	34.749	4.48	2.10	78.	0.00	30.6	33.8	2750	1.03	34.714	4.66	27.835	27.6	1.404
1595A	2.19	34.756	4.53	2.12	78.	0.00	30.6	32.5	3000	0.80	34.704	4.83	27.842	26.9	1.485
1724A	2.08	34.762	4.59	2.10	83.	0.00	30.4	31.2	3250	0.65	34.696	4.91	27.844	26.8	1.562
1851A	2.12	34.769	4.77	2.01	77.	0.00	29.0	29.5	3500	0.46	34.686	5.00	27.848	26.4	1.636
2004A	1.91	34.770	4.72	2.08	86.	0.00	29.8	29.4	3750	0.33	34.679	5.07	27.849	26.3	1.707
2155A	1.77	34.770	4.78	2.04	89.	0.00	30.0	28.3	4000	0.28	34.679	5.12	27.852	26.0	1.775
2333A	1.402	34.744	4.68	2.15	102.	0.01	31.3	28.3	4250	0.21	34.676	5.17	27.854	25.8	1.861
2512A	1.302	34.736	4.74	2.19	108.	0.00	31.5	27.7	4500	0.16	34.673	5.18	27.854	25.8	1.905
2715A	1.066	34.715	4.64	2.25	119.	0.00	32.8	27.7	4750	0.16	34.672	5.22	27.853	25.9	1.969
2919A	0.854	34.708	4.80	2.26	122.	0.00	32.9	27.0	5000	0.16	34.671	5.28	27.852	26.0	2.033
3121A	0.723	34.699	4.87	2.29	124.	0.00	32.9	26.9							
3325A	0.611	34.693	4.93	2.32	125.	0.00	32.9	26.7							
3529A	0.432	34.684	5.01	2.30	126.	0.01	32.9	26.3							
3731A	0.336	34.678	5.07	2.34	127.	0.00	33.2	26.3							
3983A	0.280	34.678	5.12	2.34	128.	0.00	33.2	26.0							
4235A	0.209	34.675	5.17	2.33	129.	0.00	33.0	25.8							
4988A	0.161	34.672	5.18	2.34	130.	0.01	33.1	25.8							
4739A	0.162	34.671	5.150	2.34	131.	0.01	33.2	25.9							
4991A	0.158	34.670	5.28	2.33	130.	0.00	33.0	26.0							
5190A	0.114	34.663	5.34	2.30	129.	0.01	32.9	26.3							

19 S

INFORMED LEG WILL SIGH

197

LATITUDE 49 07.5S	LONGITUDE 41 21.4W	MO/DAY/YR 11/23/78	START TIME 1400 GMT	LATITUDE 49 08. S	LONGITUDE 41 21. W	MO/DAY/YR 11/23/78	START TIME 0917 GMT				
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	5.251	34.012	26.886	117.6	0.000	0	5.252	34.009	26.884	117.8	0.000
10	5.209	34.015	26.893	116.8	0.012	10	5.254	34.006	26.881	118.0	0.012
20	5.231	34.014	26.890	117.2	0.023	20	5.245	34.009	26.884	117.7	0.024
30	5.196	34.013	26.893	116.9	0.035	30	5.157	34.014	26.899	116.3	0.035
40	4.524	34.026	26.979	108.7	0.046	40	4.726	34.043	26.971	109.5	0.047
50	4.325	34.023	26.999	106.9	0.057	50	4.220	34.023	27.010	105.8	0.057
75	3.602	34.087	27.123	95.1	0.083	75	3.555	34.096	27.135	94.0	0.083
100	3.380	34.125	27.175	90.2	0.106	100	3.385	34.123	27.173	90.4	0.106
125	3.213	34.125	27.190	88.7	0.129	125	3.221	34.124	27.189	88.8	0.128
150	2.980	34.113	27.202	87.6	0.151	150	3.001	34.110	27.204	87.4	0.151
175	2.372	34.071	27.221	85.8	0.173	175	2.414	34.074	27.220	85.9	0.173
200	2.490	34.100	27.234	84.3	0.194	200	2.494	34.098	27.232	84.7	0.194
225	2.499	34.113	27.244	83.6	0.216	225	2.592	34.109	27.233	84.7	0.216
250	2.570	34.132	27.253	82.7	0.237	250	2.522	34.114	27.243	83.7	0.237
275	2.556	34.139	27.260	82.1	0.258	275	2.432	34.124	27.258	82.2	0.258
300	2.550	34.164	27.280	80.2	0.278	300	2.458	34.145	27.273	80.9	0.279
350	2.285	34.180	27.315	76.9	0.318	350	2.275	34.176	27.313	77.1	0.319
400	2.072	34.205	27.352	73.4	0.357	400	2.225	34.216	27.349	73.7	0.356
450	2.422	34.300	27.400	68.9	0.593	450	2.399	34.268	27.376	71.1	0.395
500	2.499	34.350	27.433	65.7	0.428	500	2.490	34.338	27.424	66.5	0.446
550	2.463	34.381	27.461	63.9	0.462	550	2.453	34.365	27.449	64.2	0.465
600	2.481	34.432	27.500	59.3	0.494	600	2.373	34.398	27.482	61.1	0.497
650	2.463	34.459	27.523	57.1	0.525	650	2.435	34.452	27.520	57.5	0.529
700	2.277	34.475	27.551	54.5	0.555	700	2.286	34.475	27.549	54.7	0.559
750	2.303	34.515	27.581	51.7	0.585	750	2.330	34.509	27.574	52.3	0.587
800	2.306	34.548	27.607	49.2	0.610	800	2.282	34.534	27.598	50.1	0.615
850	2.410	34.582	27.626	47.4	0.637	850	2.454	34.579	27.620	48.0	0.642
900	2.562	34.627	27.649	45.3	0.662	900	2.601	34.619	27.639	46.2	0.666
950	2.590	34.643	27.659	44.3	0.687	950	2.603	34.640	27.655	44.6	0.693
1000	2.394	34.651	27.666	43.6	0.712	1000	2.316	34.618	27.662	44.0	0.716
1022	2.267	34.621	27.669	43.4	0.723	1100	2.226	34.645	27.691	41.2	0.766
						1200	2.613	34.734	27.730	37.6	0.812
						1300	2.348	34.716	27.738	36.8	0.856
						1400	2.337	34.739	27.757	35.0	0.906
						1500	2.219	34.740	27.768	34.0	0.992
						1600	2.213	34.755	27.780	32.6	0.963
						1700	2.075	34.752	27.789	32.0	1.024
						1800	2.119	34.778	27.806	30.3	1.066
						1900	2.188	34.801	27.819	29.1	1.103
						2000	1.894	34.767	27.815	29.5	1.141
						2100	1.836	34.771	27.823	28.7	1.179
						2200	1.755	34.770	27.828	28.2	1.216
						2300	1.548	34.747	27.825	28.5	1.255
						2400	1.409	34.738	27.828	28.2	1.289
						2500	1.342	34.740	27.835	27.6	1.323
						2600	1.145	34.717	27.850	28.1	1.359
						2700	1.090	34.718	27.854	27.7	1.394
						2800	0.998	34.714	27.837	27.4	1.427
						2900	0.884	34.709	27.841	27.1	1.466
						3000	0.801	34.702	27.840	27.1	1.492
						3100	0.750	34.703	27.844	26.7	1.523
						3200	0.668	34.698	27.845	26.6	1.554
						3300	0.603	34.695	27.847	26.5	1.584
						3400	0.541	34.691	27.847	26.4	1.614
						3500	0.433	34.685	27.849	26.3	1.643
						3600	0.412	34.684	27.849	26.2	1.671
						3700	0.367	34.681	27.850	26.2	1.699
						3800	0.311	34.679	27.851	26.1	1.726
						3900	0.291	34.677	27.851	26.1	1.756
						4000	0.258	34.676	27.852	26.0	1.781
						4100	0.239	34.677	27.853	25.8	1.807
						4200	0.220	34.676	27.854	25.8	1.833
						4300	0.193	34.675	27.854	25.8	1.859
						4400	0.164	34.674	27.855	25.7	1.885
						4500	0.161	34.672	27.854	25.8	1.910
						4600	0.163	34.671	27.853	25.9	1.936
						4700	0.165	34.670	27.852	26.0	1.961
						4800	0.170	34.670	27.852	26.0	1.987
						4900	0.172	34.669	27.851	26.1	2.013
						5000	0.160	34.667	27.850	26.2	2.039
						5100	0.137	34.665	27.849	26.2	2.066
						5200	0.115	34.664	27.850	26.2	2.090

RV MELVILLE

INDOMED LEG XIII

Z	T	S	02	PO4	SI03	NO2	NO3	DT	Z	T	S	02	SI07	DT	DD	DOMINANT WAVES		
																MESSENGER	TIME	BOTTOM
49 26. S	41 06. W	11/23/78														1934	2322	GMT
Z	T	S	02	PO4	SI03	NO2	NO3	DT	Z	T	S	02	SI07	DT	DD			4227M
1	3.95	33.954	7.99	1.40	6.	0.21	20.1	106.4	0	3.95	33.954	7.99	26.983	108.4	0.000			
52	2.85	33.943	7.91	1.63	11.	0.21	22.7	99.3	10	3.69	33.948	7.98	27.004	106.4	0.011			
93	2.65	33.968	7.63	1.72	14.	0.19	23.8	95.8	20	3.44	33.944	7.96	27.025	104.4	0.021			
134	2.09	34.025	7.51	1.82	17.	0.05	26.2	87.1	30	3.21	33.942	7.94	27.044	102.6	0.032			
175	1.57	34.006	7.54	1.83	19.	0.03	26.7	84.9	50	2.88	33.944	7.91	27.076	99.6	0.052			
226	2.10	34.105	6.84	2.01	24.	0.02	28.5	81.1	75	2.72	33.955	7.75	27.098	97.4	0.077			
246	2.07	34.130	6.56	2.05	27.	0.02	29.3	79.0	100	2.57	33.980	7.60	27.132	94.3	0.101			
287	1.95	34.151	6.35	2.12	31.	0.01	30.2	76.5	125	2.23	34.015	7.52	27.187	89.0	0.124			
328	1.90	34.170	6.29	2.17	34.	0.01	30.6	76.7	150	1.83	34.018	7.52	27.220	85.9	0.146			
368	1.89	34.208	5.77	2.22	39.	0.01	31.6	71.8	200	1.80	34.050	7.25	27.248	83.3	0.168			
419	1.86	34.247	5.51	2.29	46.	0.02	32.6	68.6	250	2.06	34.134	6.55	27.296	78.7	0.229			
470	2.28	34.356	4.66	2.40	55.	0.01	33.6	63.5	300	1.93	34.157	6.33	27.324	76.0	0.268			
536	2.331	34.414	4.54	2.42	62.	0.01	34.1	59.5	400	1.87	34.233	5.62	27.389	69.9	0.343			
613	2.358	34.475	4.29	2.45	68.	0.01	34.4	59.1	500	2.50	34.386	4.61	27.477	61.5	0.410			
715	2.315	34.532	3.81	2.45	74.	0.01	34.4	50.5	600	2.96	34.466	4.34	27.537	55.8	0.472			
816	2.252	34.574	4.01	2.42	79.	0.01	34.1	46.8	700	2.92	34.525	3.86	27.587	51.1	0.529			
918	2.200	34.608	4.02	2.39	82.	0.01	32.9	43.8	800	2.26	34.570	3.96	27.627	47.3	0.582			
1020	2.148	34.636	4.08	2.39	85.	0.02	33.5	41.3	1000	2.16	34.632	4.07	27.686	41.8	0.680			
1122	2.086	34.662	4.10	2.35	88.	0.02	33.3	38.9	1200	2.05	34.677	4.12	27.780	37.6	0.770			
1224	2.041	34.679	4.13	2.35	90.	0.01	33.0	37.2	1500	1.83	34.717	4.19	27.780	32.9	0.894			
1325	1.969	34.691	3.97	2.31	93.	0.00	34.6	35.8	1750	1.65	34.750	4.23	27.804	30.5	0.989			
1412A	1.89	34.708	3.87	2.26	95.	0.00	32.6	35.9	2000	1.40	34.721	4.48	27.815	29.5	1.000			
1505	1.827	34.716	4.21	2.28	97.	0.00	32.3	32.8	2250	1.21	34.720	4.69	27.828	28.2	1.167			
1564A	1.77	34.734	4.25	2.26	98.	0.00	32.4	32.6	2500	0.96	34.715	4.50	27.940	27.1	1.250			
1639A	1.73	34.732	4.31	2.26	99.	0.01	32.3	30.9	2750	0.79	34.706	4.77	27.993	26.8	1.329			
1716A	1.68		4.15	2.22	100.	0.01	32.3		3000	0.72	34.703	4.79	27.945	26.6	1.406			
1796A	1.60		4.36	2.31	103.	0.00	32.2		3250	0.71	34.701	4.74	27.984	26.7	1.483			
1867A	1.52	34.724	4.33	2.26	107.	0.00	32.1	30.1	3500	0.68	34.697	4.98	27.943	26.8	1.561			
1943A	1.43		4.56	2.27	108.	0.00	32.1											
2094A	1.39	34.721	4.44	2.28	110.	0.01	32.2	29.4										
2094A	1.32		4.45	2.29	111.	0.01	32.0											
2172A	1.26	34.721	4.65	2.26	113.	0.01	32.0	28.5										
2246A	1.21	34.720	4.48	2.25	115.	0.00	32.1	28.3										
2322A	1.123	34.720	4.62	2.28	117.	0.01	32.1	27.7										
2398A	1.058	34.715	4.47	2.28	117.	0.01	32.1	27.7										
2474A	0.991		4.37	2.27	118.	0.00	32.2											
2549A	0.912	34.714	4.77	2.29	119.	0.01	32.1	26.9										
2651A	0.855	34.708	4.76	2.28	121.	0.01	32.4	27.0										
2752A	0.794	34.705	4.77	2.26	121.	0.02	32.4	26.8										
2854A	0.781	34.704	4.17U	2.26	121.	0.01	32.3	26.8										
2955A	0.736	34.700	4.74	2.29	123.	0.02	32.3	26.9										
3055A	0.704	34.705	4.85	2.28	121.	0.00	32.0	26.3										
3207A	0.709	34.700	4.72	2.28	122.	0.00	32.3	26.7										
3360A	0.716	34.700	4.83	2.28	121.	0.00	32.2	26.8										
3511A	0.675	34.696	4.99	2.28	123.	0.00	32.2	26.8										
3663A	0.679	34.696	4.96	2.26	123.	0.02	31.8	29.9										

RV MELVILLE

INDOMED LEG XIII

Z	T	S	02	PO4	SI03	NO2	NO3	DT	Z	T	S	02	SI07	DT	DD	DOMINANT WAVES		
																MESSENGER	TIME	BOTTOM
49 41.8S	41 07.8W	11/24/78														0406	GMT	1839M
0	3.61	33.944	7.67	1.46	6.	0.21	20.6	107.6	0	3.61	33.944	7.67	26.989	107.6	0.000			
25	3.78	33.944	7.67	1.47	8.	0.22	21.0	107.5	10	3.80	33.945	7.67	26.990	107.7	0.011			
51	3.09	33.959	7.68	1.63	12.	0.20	22.8	100.1	20	3.79	33.948	7.67	26.991	107.6	0.022			
76	5.00	33.958	7.59	1.68	13.	0.20	23.2	99.5	30	3.65	33.948	7.64	27.007	106.1	0.032			
102	2.49	33.991	7.35	1.79	16.	0.16	23.1	92.6	50	3.12	33.960	7.69	27.067	100.4	0.053			
132	1.76	33.994	7.51	1.85	18.	0.03	26.3	87.1	75	3.00	33.959	7.59	27.077	99.5	0.078			
173	1.62	34.009	7.41	1.91	20.	0.02	27.0	85.0	100	2.54	33.969	7.36	27.141	93.4	0.102			
214	2.10	34.120	6.58	2.00	27.	0.01	29.2	80.0	125	1.91	33.996	7.46	27.196	88.2	0.125			
254	1.85	34.147	6.28	2.77	32.	0.01	30.5	76.1	150	1.70	34.005	7.67	27.219	85.9	0.147			
305	1.90	34.197	5.75	2.22	38.	0.01	31.6	72.7	200	1.99	34.002	6.98	27.263	81.8	0.189			
356	2.06	34.243	5.36	2.29	44.	0.01	32.3	70.4	250	1.89	34.197	6.29	27.319	76.5	0.229			
433	2.21	34.333	4.84	2.91	54.	0.01	32.7	64.7	300	1.90	34.194	5.80	27.356	75.0	0.267			

21 S

INDOMED LEG XIII CTD

21 D

LATITUDE	LONGITUDE	MU/DAY/YR	START TIME	LATITUDE	LONGITUDE	MU/DAY/YR	START TIME
49 26.0S	41 17.0W	11/23/78	2235 GMT	49 26. S	41 16. W	11/23/78	1817 GMT

Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	3.966	33.950	26.978	108.8	0.000	0	4.038	33.959	26.978	108.9	0.000
10	3.972	33.947	26.975	109.1	0.011	10	3.998	33.952	26.976	109.0	0.011
20	3.969	33.948	26.976	109.0	0.022	20	3.966	33.949	26.977	108.9	0.022
30	3.897	33.952	26.987	108.0	0.033	30	3.281	33.912	27.015	105.4	0.033
40	3.665	33.951	27.009	105.9	0.043	40	3.055	33.912	27.035	103.4	0.043
50	3.295	33.952	27.045	102.5	0.054	50	3.009	33.921	27.047	102.3	0.053
75	2.795	33.949	27.088	98.4	0.079	75	2.950	33.949	27.074	99.7	0.079
100	2.694	33.968	27.112	96.1	0.104	100	2.821	33.961	27.095	97.7	0.103
125	2.425	34.000	27.160	91.6	0.127	125	2.631	33.977	27.124	95.0	0.128
150	2.055	34.025	27.210	86.9	0.150	150	2.070	34.024	27.208	87.1	0.151
175	1.645	34.008	27.221	85.2	0.171	175	1.862	34.017	27.218	86.1	0.172
200	1.904	34.050	27.241	83.9	0.193	200	1.710	34.031	27.241	85.9	0.194
225	2.072	34.085	27.256	82.4	0.214	225	2.087	34.101	27.268	81.3	0.215
250	2.146	34.118	27.277	80.5	0.234	250	2.117	34.129	27.288	79.5	0.235
275	2.033	34.159	27.302	78.1	0.254	275	2.005	34.140	27.305	77.8	0.255
300	1.979	34.147	27.315	77.1	0.274	300	1.873	34.146	27.320	76.4	0.274
350	1.909	34.177	27.392	74.3	0.312	350	1.701	34.163	27.347	75.9	0.313
400	1.764	34.218	27.386	70.1	0.349	400	1.781	34.243	27.405	68.4	0.349
450	1.993	34.302	27.436	65.4	0.384	450	2.185	34.325	27.459	65.1	0.383
500	2.340	34.385	27.474	61.8	0.417	500	2.313	34.376	27.469	62.5	0.416
550	2.353	34.420	27.501	59.2	0.448	550	2.357	34.424	27.504	59.0	0.448
600	2.378	34.441	27.516	57.8	0.479	600	2.375	34.467	27.537	55.8	0.478
650	2.361	34.484	27.552	54.5	0.509	650	2.312	34.489	27.560	53.7	0.507
700	2.323	34.512	27.577	52.0	0.537	700	2.297	34.526	27.588	51.0	0.535
750	2.299	34.536	27.598	50.0	0.565	750	2.291	34.548	27.608	49.1	0.562
800	2.276	34.562	27.621	47.9	0.591	800	2.267	34.572	27.630	47.1	0.588
850	2.265	34.573	27.630	47.0	0.617	850	2.244	34.590	27.646	45.5	0.613
900	2.215	34.600	27.656	44.5	0.642	900	2.213	34.601	27.657	44.4	0.648
950	2.193	34.616	27.671	43.2	0.666	950	2.204	34.613	27.667	43.5	0.662
1000	2.165	34.630	27.684	41.9	0.690	1000	2.185	34.626	27.679	42.3	0.686
1100	2.090	34.661	27.715	39.0	0.736	1100	2.124	34.655	27.708	39.7	0.732
1200	2.044	34.677	27.731	37.4	0.779	1200	2.044	34.680	27.734	37.2	0.776
1300	2.005	34.686	27.742	36.4	0.822	1300	1.972	34.692	27.749	35.7	0.818
1400	1.907	34.700	27.761	34.6	0.864	1400	1.918	34.700	27.760	34.7	0.860
1500	1.826	34.709	27.774	33.4	0.904	1500	1.836	34.707	27.772	33.6	0.900
						1600	1.775	34.714	27.782	32.6	0.900
						1700	1.668	34.719	27.794	31.5	0.978
						1800	1.588	34.721	27.802	30.8	1.016
						1900	1.472	34.723	27.812	29.8	1.052
						2000	1.396	34.721	27.816	29.4	1.088
						2100	1.328	34.721	27.820	29.0	1.124
						2200	1.224	34.720	27.827	28.4	1.158
						2300	1.155	34.717	27.829	28.2	1.192
						2400	1.076	34.715	27.835	27.6	1.226
						2500	0.985	34.713	27.837	27.4	1.259
						2600	0.879	34.709	27.841	27.0	1.291
						2700	0.821	34.707	27.843	26.8	1.322
						2800	0.807	34.706	27.843	26.8	1.353
						2900	0.745	34.703	27.845	26.7	1.384
						3000	0.717	34.701	27.845	26.7	1.415
						3100	0.727	34.701	27.844	26.7	1.446
						3200	0.725	34.700	27.844	26.8	1.477
						3300	0.718	34.699	27.843	26.8	1.508
						3400	0.687	34.697	27.843	26.8	1.539
						3500	0.684	34.696	27.843	26.9	1.570
						3600	0.678	34.696	27.843	26.8	1.602
						3678	0.673	34.696	27.844	26.8	1.626

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LATITUDE	LONGITUDE	MU/DAY/YR	START TIME
49 42.1S	41 17.5W	11/24/78	0252 GMT

Z	T	S	SIGMA T	DT	DD
0	3.838	33.950	26.991	107.6	0.000
10	3.847	33.948	26.988	107.8	0.011
20	3.840	33.948	26.989	107.8	0.022
30	3.836	33.948	26.990	107.7	0.032
40	3.660	33.950	27.009	105.9	0.043
50	3.139	33.963	27.068	100.3	0.053
75	3.019	33.964	27.080	99.2	0.078
100	2.771	33.980	27.115	95.9	0.103
125	1.951	34.005	27.202	87.6	0.126
150	1.663	34.004	27.222	85.7	0.148
175	1.682	34.026	27.239	84.1	0.169
200	2.159	34.115	27.273	80.8	0.190
225	2.005	34.159	27.305	77.9	0.210
250	1.850	34.154	27.329	75.6	0.229
275	1.843	34.170	27.342	74.3	0.248
300	1.929	34.208	27.366	72.1	0.267
350	2.146	34.279	27.405	68.3	0.303
400	2.245	34.328	27.437	65.4	0.357
450	2.359	34.394	27.480	61.2	0.370
500	2.357	34.428	27.507	58.7	0.401
550	2.317	34.459	27.535	56.0	0.431
600	2.309	34.503	27.571	52.6	0.460
650	2.244	34.582	27.599	49.9	0.487
700	2.271	34.556	27.618	48.1	0.516
750	2.249	34.581	27.638	46.2	0.539
800	2.232	34.604	27.658	44.4	0.563
850	2.199	34.619	27.673	43.0	0.587
900	2.180	34.632	27.685	41.8	0.611
950	2.147	34.645	27.698	40.6	0.634
1000	2.125	34.655	27.707	39.7	0.656
1100	2.069	34.672	27.726	38.0	0.700
1200	1.977	34.691	27.748	35.8	0.742
1300	1.882	34.704	27.766	34.2	0.783
1400	1.794	34.715	27.781	32.7	0.822
1500	1.709	34.720	27.792	31.7	0.860
1600	1.648	34.725	27.800	30.9	0.897
1700	1.550	34.728	27.810	30.0	0.934
1800	1.475	34.727	27.815	29.5	0.969
1839	1.478	34.726	27.814	29.6	0.983

RV MELVILLE

INCOMING LEG XIII

Z	T	S	02	PO4	SI03	NO2	NO3	DT	Z	T	S	02	SI07	DT	DOMINANT WAVES			
															320	8	6	
1	2.69	33.878	8.48	1.19	2.	0.26	17.8	102.9	0	2.69	33.878	8.48	27.041	102.9	0.000			
33	2.55	33.878	8.41	1.24	2.	0.28	18.6	101.0	10	2.62	33.879	8.46	27.046	102.4	0.010			
63	1.71	33.880	8.12	1.47	4.	0.33	20.6	95.4	20	2.55	33.879	8.44	27.052	101.8	0.020			
94	1.60	33.881	8.00	1.48	5.	0.34	20.9	94.6	30	2.47	33.879	8.42	27.059	101.2	0.031			
124	0.83	33.928	7.94	1.89	22.	0.25	25.8	86.2	50	2.02	33.880	8.25	27.095	97.8	0.051			
154	0.47	34.036	7.32	2.14	39.	0.14	29.8	75.9	75	1.67	33.880	8.06	27.121	95.2	0.075			
184	0.89	34.203	6.10	2.29	52.	0.13	32.5	65.6	100	1.46	33.887	7.99	27.142	93.3	0.098			
215	1.18	34.307	5.41	2.40	61.	0.10	33.8	59.5	125	0.81	33.932	7.93	27.221	85.8	0.121			
256	1.44	34.405	4.88	2.47	69.	0.06	34.5	53.7	150	0.48	34.020	7.44	27.310	77.3	0.141			
306	1.65	34.485	4.65	2.47	75.	0.02	34.5	48.9	200	1.05	34.264	5.69	27.472	62.0	0.176			
367	1.76	34.544	4.33	2.44	81.	0.03	34.4	45.4	250	1.41	34.394	4.93	27.552	54.4	0.205			
438	1.84	34.599	4.28	2.42	84.	0.01	33.9	41.8	300	1.61	34.478	4.67	27.605	49.4	0.232			
518	1.017	34.634	4.31	2.37	88.	0.00	33.5	39.0	400	1.81	34.575	4.31	27.666	43.6	0.280			
610	1.859	34.673	4.29	2.34	93.	0.00	33.8	36.2	500	1.83	34.628	4.30	27.709	39.5	0.323			
712	1.790	34.690	4.32	2.33	95.	0.00	32.7	34.5	600	1.84	34.670	4.29	27.742	36.4	0.363			
813	1.690	34.700	4.41	2.29	97.	0.00	32.5	33.1	700	1.80	34.690	4.31	27.760	34.7	0.402			
885A	1.66	34.709	4.33	2.27	96.	0.00	32.4	32.2	800	1.70	34.699	4.40	27.775	33.2	0.439			
1044	1.462	34.713	4.60	2.29	103.	0.00	32.1	30.5	1000	1.52	34.714	4.52	27.800	30.9	0.510			
1137A	1.40		4.32						1200	1.38	34.719	4.54	27.814	29.5	0.577			
1262A	1.37	34.722		2.26	107.	0.01	32.1	29.2	1500	1.07	34.712	4.69	27.831	28.0	0.675			
1369A	1.15	34.712	4.60	2.25	109.	0.01	32.1	28.5	1750	0.80	34.703	4.86	27.840	27.1	0.751			
1514A	1.06	34.712	4.70	2.26	114.	0.00	32.2	27.9	2000	0.64	34.699	4.92	27.844	26.8	0.825			
1640A	0.92	34.710	4.77	2.27	115.	0.01	32.1	27.2	2250	0.49	34.689	4.97	27.848	26.3	0.897			
1765A	0.79	34.701	4.67	2.26	116.	0.00	32.2	27.1	2500	0.39	34.684	4.99	27.850	26.2	0.966			
1892A	0.70	34.698	4.86	2.26	120.	0.00	32.4	26.8	2750	0.27	34.678	5.14	27.851	26.0	1.034			
2018A	0.63	34.693	4.93	2.26	120.	0.00	32.3	26.8	3000	0.18	34.674	5.20	27.854	25.8	1.100			
2144A	0.54	34.690	4.98	2.29	122.	0.01	32.4	26.5	3250	0.08	34.671	5.27	27.857	25.5	1.163			
2270A	0.48	34.688	4.97	2.28	122.	0.01	32.4	26.3										
2399A	0.43	34.684	5.03	2.31	123.	0.01	32.4	26.3										
2526A	0.379	34.683	4.99	2.32	123.	0.01	32.6	26.1										
2654A	0.323	34.680	5.13	2.31	124.	0.00	32.5	26.1										
2782A	0.259	34.676	5.14	2.31	125.	0.00	32.6	26.0										
2911A	0.218	34.675	5.21	2.32	125.	0.00	32.6	25.9										
3040A	0.163	34.673	5.20	2.30	127.	0.01	32.6	25.8										
3148A	0.116	34.672	5.25	2.32	128.	0.01	32.6	25.6										
3278A	0.071	34.670	5.27	2.34	129.	0.01	32.6	25.5										
3409A	0.043	34.672	5.25	2.32	130.	0.01	32.7	25.2										

24 S							INDOMED LEG XIII CTD							24 N								
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		Z	T	S	SIGMA T	DT	DU	Z	T	S	SIGMA T	DT	DU	
49 30.6S	39 29.4W	11/24/78	1708 GMT		49 30.5S	39 27.9W	11/24/78	1207 GMT														
0	2.723	33.879	27.038	103.1	0.000	0	2.643	33.874	27.041	102.8	0.000											
10	2.716	33.877	27.037	103.2	0.010	10	2.624	33.876	27.045	102.5	0.010											
20	2.698	33.876	27.036	103.1	0.021	20	2.603	33.876	27.046	102.4	0.021											
30	2.660	33.876	27.041	102.8	0.031	30	2.517	33.877	27.054	101.6	0.031											
40	2.484	33.877	24.057	101.3	0.041	40	2.377	33.878	27.067	100.4	0.041											
50	2.135	33.878	27.066	98.6	0.051	50	1.934	33.875	27.099	97.4	0.051											
75	1.678	33.884	27.125	94.9	0.075	75	1.698	33.884	27.124	95.0	0.075											
100	1.585	33.885	27.133	94.2	0.099	100	1.630	33.883	27.128	94.6	0.099											
125	0.969	33.919	27.201	87.7	0.122	125	0.887	33.932	27.217	86.2	0.121											
150	0.442	33.997	27.295	78.7	0.143	150	0.458	34.027	27.319	76.5	0.142											
175	0.770	34.163	27.410	67.9	0.161	175	0.795	34.172	27.415	67.4	0.160											
200	1.069	34.271	27.477	61.5	0.177	200	1.116	34.291	27.490	60.3	0.176											
225	1.295	34.343	27.520	57.5	0.192	225	1.313	34.356	27.531	56.4	0.190											
250	1.425	34.396	27.553	54.3	0.206	250	1.429	34.402	27.558	53.9	0.204											
275	1.550	34.446	27.584	51.4	0.220	275	1.552	34.445	27.585	51.4	0.218											
300	1.634	34.478	27.604	49.5	0.233	300	1.624	34.479	27.605	49.4	0.231											
350	1.726	34.531	27.639	46.1	0.257	350	1.729	34.531	27.639	46.2	0.255											
400	1.796	34.570	27.665	43.7	0.280	400	1.776	34.560	27.659	44.3	0.278											
450	1.836	34.604	27.689	41.4	0.303	450	1.842	34.596	27.682	42.0	0.301											
500	1.820	34.625	27.707	39.7	0.324	500	1.830	34.617	27.700	40.4	0.322											
550	1.877	34.650	27.723	38.2	0.344	550	1.822	34.634	27.714	39.0	0.343											
600	1.849	34.672	27.743	36.3	0.364	600	1.870	34.655	27.728	37.8	0.364											
650	1.836	34.683	27.755	35.4	0.384	650	1.865	34.670	27.740	36.6	0.384											
700	1.805	34.687	27.758	34.9	0.403	700	1.847	34.682	27.752	35.4	0.403											
750	1.776	34.694	27.766	34.1	0.421	750	1.785	34.694	27.765	34.2	0.422											
800	1.740	34.699	27.773	33.5	0.440	800	1.744	34.699	27.772	33.5	0.441											
850	1.674	34.704	27.782	32.7	0.458	850	1.664	34.699	27.778	33.0	0.459											
900	1.644	34.708	27.787	32.1	0.476	900	1.631	34.706	27.786	32.2	0.477											
950	1.569	34.709	27.793	31.5	0.494	950	1.608	34.709	27.790	31.8	0.495											
1000	1.522	34.712	27.799	31.0	0.511	1000	1.551	34.712	27.797	31.2	0.512											
1053	1.455	34.712	27.804	30.5	0.529	1100	1.421	34.711	27.806	30.4	0.546											
						1200	1.396	34.720	27.815	29.5	0.580											
						1300	1.268	34.716	27.821	29.0	0.613											
						1400	1.134	34.711	27.826	28.5	0.645											
						1500	1.046	34.710	27.831	28.0	0.677											
						1600	0.962	34.707	27.833	27.8	0.708											
						1700	0.902	34.705	27.836	27.5	0.739											
						1800	0.806	34.700	27.838	27.3	0.770											
						1900	0.707	34.698	27.843	26.8	0.800											
						2000	0.632	34.695	27.845	26.6	0.829											
						2100	0.579	34.691	27.845	26.6	0.856											
						2200	0.526	34.688	27.846	26.6	0.886											
						2300	0.481	34.687	27.848	26.4	0.915											
						2400	0.429	34.684	27.848	26.3	0.943											
						2500	0.380	34.681	27.849	26.3	0.970											
						2600	0.333	34.680	27.851	26.1	0.998											
						2700	0.291	34.678	27.851	26.0	1.025											
						2800	0.254	34.679	27.854	25.8	1.051											
						2900	0.206	34.676	27.854	25.7	1.077											
						3000	0.162	34.675	27.856	25.6	1.103											
						3100	0.132	34.672	27.855	25.7	1.128											
						3200	0.109	34.672	27.857	25.6	1.153											
						3300	0.068	34.672	27.859	25.4	1.178											
						3400	0.042	34.671	27.859	25.3	1.202											
						3500	0.016	34.670	27.860	25.2	1.226											
						3600	-0.013	34.673	27.864	24.9	1.249											
						3700	-0.056	34.671	27.864	24.8	1.272											
						3800	-0.081	34.668	27.863	24.9	1.295											
						3900	-0.114	34.666	27.863	24.9	1.317											
						4000	-0.177	34.665	27.866	24.7	1.338											
						4043	-0.181	34.665	27.866	24.7	1.347											

RV MELVILLE

INBOUND LEG XIII

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LATITUDE	LONGITUDE	MO/DAY/YR	MESSENDER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
49 26.3S	38 08.4W	11/24/78	2326 0245	GMT	4645M	270	25KT	1	DU						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	S103	DT	DU
1	2.61	33.856	8.38	1.16	2.	0.27	17.4	103.9	0	2.61	33.856	8.38	27.030	103.9	0.000
26	2.59	33.854	8.65	1.17	2.	0.27	17.5	103.9	10	2.60	33.857	8.53	27.030	103.9	0.010
52	1.06	33.850	8.42	1.49	8.	0.25	21.6	95.0	20	2.57	33.856	8.63	27.030	103.9	0.021
78	0.76	33.840	8.30	1.65	11.	0.24	22.7	92.4	30	2.56	33.849	8.63	27.043	102.6	0.031
105	0.91	33.861	8.12	1.56	6.	0.24	21.6	90.2	50	1.18	33.832	8.44	27.117	95.7	0.051
135	0.59	33.877	8.12	1.65	12.	0.24	22.9	88.7	75	0.79	33.842	8.31	27.150	92.6	0.075
155	0.50	33.977	7.46	2.08	30.	0.19	28.0	80.6	100	0.88	33.875	8.15	27.171	90.6	0.097
175	0.57	34.044	7.02	2.19	40.	0.12	29.6	75.9	125	0.71	33.881	8.12	27.185	89.2	0.120
207	0.90	34.170	6.12	2.32	50.	0.09	32.3	68.2	150	0.51	33.951	7.64	27.254	82.7	0.141
247	1.40	34.311	5.28	2.44	60.	0.06	34.1	60.6	200	0.81	34.143	6.32	27.390	69.8	0.180
297	1.74	34.431	4.63	2.47	68.	0.04	35.1	55.3	250	1.43	34.320	5.18	27.991	60.2	0.212
358	1.83	34.472	4.40	2.50	74.	0.04	35.1	51.4	300	1.78	34.415	4.61	27.945	55.1	0.242
439	1.90	34.536	4.22	2.51	79.	0.02	35.0	47.0	400	1.87	34.508	4.29	27.609	49.0	0.295
519	1.96	34.589	4.13	2.47	84.	0.02	34.4	43.4	500	1.95	34.579	4.14	27.660	44.2	0.344
610	1.94	34.627	4.10	2.43	89.	0.02	34.2	40.4	600	1.94	34.625	4.10	27.697	40.7	0.388
711	1.91	34.661	4.16	2.36	91.	0.02	34.1	37.6	700	1.91	34.659	4.15	27.726	37.9	0.451
811	1.89	34.684	4.16	2.37	95.	0.01	33.2	35.7	800	1.89	34.682	4.16	27.747	35.9	0.471
905A	1.86	34.702	4.16	2.35	95.	0.00	32.9	34.1	1000	1.80	34.711	4.21	27.778	33.0	0.568
1063	1.74	34.713	4.25	2.33	100.	0.01	32.6	32.4	1200	1.60	34.714	4.35	27.795	31.4	0.621
1211A	1.59	34.714	4.36	2.33	99.	0.00	32.5	31.3	1500	1.80	34.766	4.79	27.837	27.4	0.725
1364A	1.62	34.767	4.71	2.11	85.	0.00	29.8	28.9	1750	1.35	34.738	4.71	27.831	27.9	0.809
1517A	1.80	34.787	4.80	2.00	82.	0.01	26.8	27.3	2000	1.04	34.722	4.66	27.881	27.0	0.890
1670A	1.49	34.747	4.75	2.18	97.	0.00	30.9	28.1	2250	0.84	34.708	4.79	27.843	26.9	0.967
1824A	1.24	34.732	4.68	2.24	106.	0.00	31.6	27.6	2500	0.65	34.705	4.83	27.850	26.2	1.042
1979A	1.06	34.724	4.66	2.28	111.	0.00	32.1	27.0	2750	0.44	34.702	5.01	27.861	25.2	1.112
2132A	0.927	34.711	4.72	2.29	116.	0.00	32.3	27.2	3000	0.31	34.683	5.03	27.854	25.8	1.180
2284A	0.810	34.707	4.81	2.30	118.	0.01	32.5	26.8	3250	0.20	34.678	5.13	27.856	25.6	1.245
2439A	0.687	34.703	4.83	2.33	119.	0.00	32.5	26.3	3500	0.14	34.675	5.11	27.857	25.5	1.309
2592A	0.592	34.701	4.82	2.33	119.	0.03	32.8	26.0	3750	0.09	34.672	5.21	27.856	25.6	1.371
2746A	0.447	34.701	5.01	2.35	123.	0.01	32.9	25.1	4000	0.05	34.669	5.26	27.856	25.6	1.432
2898A	0.362	34.687	4.99	2.32	126.	0.01	33.0	25.7	4250	-0.01	34.665	5.28	27.857	25.5	1.492
3051A	0.279	34.680	5.05	2.33	128.	0.01	33.0	25.8	4500	-0.12	34.659	5.45	27.857	25.5	1.548

RV MELVILLE

INBOUND LEG XIII

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LATITUDE	LONGITUDE	MO/DAY/YR	MESSENDER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
48 41.8S	33 02.6W	11/26/78	0047 0524	GMT	5542M	270	30KT	5	DU						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	S103	DT	DU
2	3.39	33.873	8.01	1.37	2.	0.25	18.6	109.3	0	3.39	33.873	8.01	26.973	109.3	0.000
38	3.29	33.875	8.03	1.39	2.	0.25	19.9	108.2	10	3.37	33.875	8.01	26.976	109.0	0.011
73	1.67	33.847	8.09	1.64	7.	0.27	21.7	97.6	20	3.34	33.875	8.02	26.979	108.8	0.022
104	1.13	33.864	8.02	1.70	13.	0.27	23.6	98.8	30	3.31	33.876	8.03	26.982	108.5	0.033
139	1.18	33.979	7.46	1.91	20.	0.18	26.5	84.4	50	2.76	33.862	8.06	27.020	104.6	0.054
155	1.30	34.002	7.31	1.93	22.	0.10	27.4	83.4	75	1.61	33.846	8.09	27.100	97.3	0.079
175	1.46	34.044	7.02	2.02	24.		28.6	81.3	100	1.16	33.860	8.03	27.141	93.4	0.103
194	1.52	34.072	6.80	2.06	27.		29.4	79.5	125	1.16	33.939	7.70	27.204	87.4	0.126
226	1.44	34.100	6.62	2.12	31.	0.06	30.2	76.9	150	1.26	33.996	7.36	27.244	83.6	0.147
266	1.72	34.170	6.11	2.20	37.	0.05	31.6	73.5	200	1.50	34.076	6.76	27.293	79.0	0.188
317	1.96	34.239	5.50	2.30	45.	0.04	32.9	70.0	250	1.59	34.142	6.83	27.337	74.8	0.227
377	2.177	34.316	5.02	2.38	53.	0.04	34.1	65.7	300	1.89	34.216	5.69	27.376	71.1	0.264
456	2.047	34.365	4.77	2.44	63.	0.04	34.6	61.0	400	2.15	34.332	4.93	27.447	64.4	0.333
560	2.265	34.472	4.27	2.47	70.	0.03	35.0	54.6	500	2.13	34.412	4.55	27.512	58.2	0.396
642A	2.23	34.494	4.17	2.41	71.	0.02	34.6	52.7	600	2.23	34.483	4.20	27.559	53.7	0.455
737	2.199	34.574	4.08	2.45	81.	0.04	35.0	46.4	700	2.21	34.536	4.12	27.613	48.5	0.509
789A	2.21	34.567	3.99	2.38	79.	0.01	34.7	47.0	800	2.21	34.571	3.99	27.632	46.8	0.561
1017	2.075	34.652	4.08	2.38	88.	0.02	33.9	39.5	1000	2.09	34.644	4.07	27.701	40.3	0.657
1186A	2.01	34.684	4.70	2.26	89.	0.02	32.9	36.6	1200	2.02	34.689	4.70	27.743	36.3	0.744
1585A	2.19	34.753	4.71	2.09	79.	0.01	36.4	32.8	1500	2.21	34.778	4.77	27.798	31.1	0.865
1588A	2.23	34.791	4.81	1.95	72.	0.01	38.4	30.2	1750	2.03	34.776	4.78	27.813	29.7	0.962
1780A	1.98	34.773	4.78	2.03	81.	0.01	29.2	29.6	2000	1.63	34.767	4.67	27.819	29.1	1.055
1977A	1.65	34.768	4.67	2.13	94.	0.01	30.6	29.1	2250	1.41	34.739	4.74	27.828	28.3	1.144
2174A	1.48	34.792	4.71	2.14	98.	0.03	30.8	28.4	2500	1.17	34.741	4.76	27.847	26.5	1.230
2370A	1.30	34.732	4.77	2.19	104.	0.01	31.2	28.0	2750	0.93	34.714	4.78	27.841	27.0	1.311
2566A	1.102	34.762	4.75	2.22	111.	0.01	31.9	25.9	3000	0.75	34.701	4.88	27.842	26.9	1.390
2762A	0.92	34.711	4.78	2.24	115.	0.02	32.2	27.1	3250	0.55	34.691	4.97	27.846	26.5	1.466
2957A	0.773	34.702	4.87	2.23	116.	0.03	32.2	26.9	3500	0.39	34.685	5.06	27.851	26.1	1.537
3151A	0.627	34.693	4.93	2.28	121.	0.01	32.4	26.8	3750	0.28	34.683	5.12	27.856	25.6	1.605
3344A	0.476	34.688	5.00	2.30	125.	0.03	32.8	26.3	4000	0.21	34.686	5.15	27.862	25.1	1.670
3635A	0.323	34.682	5.11	2.31	126.	0.02	32.9	25.9	4250	0.17	34.684	5.19	27.862	25.0	1.732

INDOMED LEG XIII CTU									
25 S		25 D							
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
49 27.2S	38 39.0W	11/25/78	0202 GMT	49 26. S	38 38. W	11/24/78	2144 GMT		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T
0	2.661	33.856	27.025	104.3	0.000	0	2.779	33.858	27.017
10	2.466	33.849	27.036	103.3	0.010	10	2.777	33.857	27.016
20	2.483	33.852	27.037	103.2	0.021	20	2.721	33.859	27.023
30	2.404	33.844	27.041	102.9	0.031	30	2.737	33.859	27.021
40	1.959	33.832	27.063	100.8	0.041	40	1.882	33.867	27.097
50	1.156	33.826	27.115	95.9	0.051	50	1.656	33.876	27.122
75	0.795	33.847	27.154	92.1	0.075	75	1.473	33.882	27.158
100	0.771	33.874	27.178	89.9	0.097	100	1.068	33.876	27.161
125	0.876	33.890	27.184	89.3	0.120	125	1.074	33.899	27.179
150	0.558	33.973	27.270	81.2	0.141	150	0.511	33.978	27.276
175	0.605	34.057	27.334	75.1	0.161	175	0.609	34.067	27.342
200	0.892	34.168	27.406	60.3	0.179	200	1.018	34.206	27.426
225	1.256	34.275	27.468	62.4	0.195	225	1.255	34.274	27.467
250	1.498	34.340	27.503	59.0	0.210	250	1.444	34.330	27.499
275	1.649	34.380	27.524	57.0	0.225	275	1.673	34.386	27.527
300	1.775	34.420	27.547	54.9	0.239	300	1.768	34.417	27.545
350	1.825	34.466	27.580	51.8	0.267	350	1.865	34.480	27.588
400	1.873	34.508	27.610	48.9	0.293	400	1.894	34.510	27.610
450	1.913	34.545	27.636	46.4	0.317	450	1.955	34.547	27.635
500	1.924	34.573	27.658	44.4	0.341	500	1.941	34.576	27.659
550	1.993	34.607	27.680	42.3	0.364	550	1.989	34.606	27.679
600	1.997	34.625	27.694	41.0	0.386	600	1.927	34.619	27.694
650	2.000	34.645	27.709	39.5	0.408	650	1.934	34.636	27.707
700	1.898	34.646	27.718	38.7	0.429	700	1.918	34.655	27.724
750	1.910	34.668	27.735	37.1	0.449	750	1.905	34.668	27.735
775	1.902	34.670	27.737	36.9	0.459	800	1.904	34.682	27.746
						800	1.860	34.689	27.755
						900	1.868	34.699	27.763
						950	1.852	34.702	27.766
						1000	1.804	34.707	27.774
						1100	1.666	34.704	27.782
						1200	1.601	34.712	27.794
						1300	1.842	34.764	27.817
						1400	1.983	34.797	27.832
						1500	1.803	34.780	27.833
						1600	1.678	34.767	27.832
						1700	1.384	34.733	27.826
						1800	1.288	34.729	27.830
						1900	1.129	34.717	27.831
						2000	1.044	34.714	27.834
						2100	0.957	34.709	27.836
						2200	0.879	34.707	27.839
						2300	0.807	34.704	27.841
						2400	0.722	34.701	27.844
						2500	0.658	34.696	27.844
						2600	0.598	34.695	27.847
						2700	0.479	34.689	27.849
						2800	0.421	34.686	27.850
						2900	0.357	34.684	27.853
						3000	0.290	34.679	27.852
						3100	0.246	34.678	27.854
						3200	0.211	34.677	27.855
						3300	0.180	34.675	27.855
						3400	0.158	34.672	27.854
						3500	0.144	34.672	27.855
						3600	0.122	34.673	27.857
						3700	0.106	34.671	27.856
						3800	0.080	34.670	27.856
						3900	0.064	34.667	27.855
						4000	0.052	34.665	27.854
						4100	0.033	34.664	27.854
						4200	0.004	34.669	27.860
						4300	-0.025	34.667	27.860
						4400	-0.067	34.666	27.861
						4500	-0.145	34.661	27.861
						4600	-0.176	34.660	27.862
						4616	-0.179	34.659	27.861
									25.1
									1.583
									1.555
									1.555
									1.576
									1.580
26									
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	Z	T	S	SIGMA T	DT	DD
48 43.5S	33 55.9W	11/26/78	0432 GMT	0	3.432	33.875	26.969	109.6	0.000
10	3.420	33.878	26.974	109.2	0.011				
20	3.425	33.878	26.974	109.2	0.022				
30	3.424	33.878	26.974	109.2	0.033				
40	2.995	33.866	27.009	105.9	0.044				
50	2.005	33.854	27.077	99.5	0.054				
75	1.754	33.861	27.101	97.1	0.079				
100	1.155	33.854	27.137	93.7	0.102				
125	1.148	33.840	27.207	87.1	0.125				
150	1.341	34.011	27.251	83.0	0.146				
175	1.359	34.058	27.271	81.0	0.167				
200	1.556	34.093	27.301	78.2	0.187				
225	1.512	34.119	27.325	75.9	0.206				
250	1.386	34.132	27.345	74.1	0.225				
275	1.605	34.168	27.358	72.6	0.244				
300	1.890	34.219	27.377	71.0	0.262				
350	2.101	34.269	27.417	67.2	0.297				
400	2.184	34.353	27.445	64.5	0.331				
450	2.141	34.360	27.470	62.1	0.364				
500	2.099	34.403	27.508	58.6	0.395				
550	2.234	34.457	27.540	55.5	0.425				
600	2.306	34.494	27.564	53.3	0.493				
650	2.291	34.526	27.591	50.7	0.481				
700	2.197	34.555	27.622	47.8	0.507				
750	2.204	34.574	27.636	46.4	0.533				
800	2.181	34.594	27.654	44.7	0.557				
850	2.126	34.615	27.675	42.7	0.581				
900	2.145	34.635	27.690	41.4	0.605				
950	2.143	34.646	27.699	40.5	0.627				
1000	2.085	34.650	27.707	39.8	0.650				
1026	2.088	34.658	27.713	39.2	0.661				

RV MELVILLE

INSTRUMENTS LOG XIII

27

L	T	S	O2	PO4	SI03	NO2	NO3	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
													SI07	DT	DD	
2	4.98	33.962	7.51	1.43	7.	0.23	19.7	118.3	0	4.98	33.962	7.51	26.878	118.3	0.000	
21	4.94	33.958	7.58	1.43	7.	0.24	19.9	118.2	10	4.97	33.962	7.56	26.879	118.3	0.012	
47	4.83	33.961	7.47	1.43	6.	0.17	19.8	116.8	20	4.94	33.960	7.58	26.879	118.2	0.024	
72	4.79	33.960	7.33	1.43	7.	0.22	19.7	116.4	30	4.90	33.960	7.56	26.884	117.7	0.035	
93	4.02	33.964	7.34	1.59	10.	0.22	21.5	108.3	50	4.85	33.962	7.45	26.895	116.7	0.059	
113	3.87	33.966	7.33	1.62	11.	0.25	22.0	106.7	75	4.68	33.961	7.33	26.910	115.3	0.088	
133	3.43	33.963	7.40	1.70	13.	0.32	22.9	102.8	100	3.95	33.967	7.34	26.992	107.5	0.116	
164	2.05	33.919	7.65	1.83	18.	0.15	26.0	94.9	125	3.64	33.967	7.36	27.023	104.6	0.143	
205	1.97	33.988	7.25	1.90	20.	0.05	27.0	89.0	150	2.66	33.935	7.54	27.086	98.4	0.169	
245	1.53	34.043	6.87	2.05	27.	0.04	29.0	81.8	200	1.98	33.982	7.32	27.180	89.7	0.216	
276	1.52	34.113	6.42	2.19	34.	0.03	30.8	76.4	250	1.53	34.037	6.80	27.274	80.8	0.259	
306	1.76	34.171	6.00	2.22	37.	0.04	31.4	75.7	300	1.71	34.161	6.08	27.344	76.1	0.298	
357	1.92	34.226	5.50	2.33	44.	0.03	32.6	70.5	400	2.04	34.276	5.18	27.411	67.7	0.370	
429	2.10	34.307	5.01	2.41	52.	0.02	33.6	65.8	500	2.15	34.375	4.68	27.481	61.1	0.437	
510	2.15	34.383	4.64	2.46	61.	0.03	34.4	60.5	600	2.26	34.446	4.31	27.529	56.6	0.498	
612	2.27	34.453	4.28	2.48	65.	0.03	34.7	56.1	700	2.32	34.517	4.13	27.581	51.6	0.556	
714	2.32	34.526	4.11	2.46	73.	0.03	34.7	51.0	800	2.29	34.562	3.95	27.619	48.0	0.609	
830A	2.28	34.573	3.92	2.46	78.	0.01	34.7	47.1	1000	2.35	34.656	4.04	27.669	41.4	0.709	
916	2.29	34.619	4.06	2.40	81.	0.03	33.6	43.7	1200	2.05	34.668	4.00	27.723	38.2	0.799	
1033A	2.37	34.666	4.01	2.33	78.	0.03	35.0	40.8	1500	1.89	34.709	4.19	27.769	33.8	0.926	
1135A	2.11	34.658	4.00	2.38	80.	0.00	33.8	39.3	1750	1.84	34.742	4.47	27.799	31.0	1.024	
1237A	2.04	34.674	4.00	2.34	91.	0.03	35.7	37.6	2000	1.63	34.739	4.55	27.812	29.8	1.119	
1339A	2.00	34.691	4.15	2.35	91.	0.04	35.2	36.0	2250	1.46	34.742	4.67	27.827	28.3	1.210	
1491A	1.688	34.707	4.17	2.35	97.	0.03	35.0	34.0	2500	1.26	34.729	4.69	27.831	28.0	1.298	
1644A	1.692	34.736	4.48	2.21	92.	0.02	31.6	31.8	2750	1.04	34.717	4.77	27.837	27.4	1.383	
1803A	1.793	34.740	4.46	2.24	94.	0.00	31.6	30.8	3000	0.84	34.709	4.86	27.843	26.8	1.464	
1904A	1.678	34.733	4.58	2.25	99.	0.00	31.8	30.5	3250	0.62	34.696	4.95	27.846	26.6	1.342	
2154A	1.570	34.747	4.67	2.15	98.	0.01	31.2	28.7	3500	0.47	34.689	5.00	27.850	26.2	1.615	
2358A	1.342	34.735	4.68	2.21	105.	0.00	31.7	28.0	3750	0.34	34.683	5.09	27.852	26.0	1.685	
2561A	1.229	34.726	4.69	2.24	109.	0.00	32.0	28.0	4000	0.26	34.677	5.18	27.852	26.0	1.753	
2765A	1.023	34.716	4.78	2.30	114.	0.00	32.4	27.4	4250	0.20	34.675	5.22	27.853	25.9	1.819	
2967A	0.873	34.711	4.84	2.29	116.	0.00	32.4	26.8	4500	0.17	34.673	5.19	27.853	25.9	1.883	
3222A	0.641	34.696	4.95	2.31	121.	0.02	32.9	26.6	4750	0.16	34.670	5.21	27.852	26.0	1.947	
3474A	0.481	34.689	4.99	2.30	124.	0.03	33.0	26.2	5000	0.13	34.669	5.31	27.853	25.9	2.011	
3728A	0.351	34.683	5.08	2.39	127.	0.02	33.2	26.0								
3981A	0.269	34.677	5.17	2.42	128.	0.02	33.3	26.0								
4234A	0.200	34.674	5.22	2.39	130.	0.02	33.3	25.9								
4486A	0.171	34.672	5.19	2.41	130.	0.00	33.3	25.9								
4739A	0.159	34.669	5.20	2.42	131.	0.00	33.3	26.0								
4990A	0.128	34.669	5.31	2.40	131.	0.00	33.3	25.9								
5191A	0.112	34.661	5.26	2.41	129.	0.02	33.1	26.4								

27 S						INDOMED LEG XIII CTD						27 D							
LATITUDE 48 25.9S	LONGITUDE 32 09.7W	MU/DAY/YR 11/26/78	START TIME 1757 GMT	LATITUDE 48 25.5S	LONGITUDE 32 13.6W	MU/DAY/YR 11/26/78	START TIME 1252 GMT	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	5.002	33.956	26.871	119.0	0.000	0	4.891	33.957	26.884	117.7	0.000								
10	4.998	33.957	26.872	118.9	0.012	10	4.842	33.956	26.889	117.3	0.012								
20	4.998	33.957	26.872	118.9	0.024	20	4.823	33.956	26.891	117.1	0.023								
30	4.938	33.960	26.881	118.0	0.036	30	4.790	33.954	26.893	116.9	0.035								
40	4.833	33.966	26.898	116.4	0.047	40	4.789	33.955	26.894	116.8	0.047								
50	4.823	33.966	26.899	116.3	0.059	50	4.779	33.954	26.894	116.8	0.059								
75	4.223	33.971	26.968	109.8	0.088	75	3.935	33.933	26.968	109.8	0.087								
100	3.858	33.972	27.006	106.1	0.115	100	3.921	33.977	27.004	106.4	0.114								
125	2.920	33.949	27.077	99.5	0.191	125	2.892	33.935	27.068	100.3	0.190								
150	2.083	33.930	27.132	94.3	0.165	150	2.051	33.920	27.126	94.8	0.185								
175	1.911	33.945	27.157	91.9	0.188	175	2.118	33.954	27.198	92.7	0.189								
200	2.003	33.992	27.187	89.0	0.211	200	2.099	33.979	27.170	90.7	0.212								
225	1.701	34.000	27.216	86.2	0.233	225	1.395	33.960	27.206	87.2	0.234								
250	1.529	34.051	27.270	81.2	0.254	250	1.339	33.994	27.237	84.3	0.256								
275	1.523	34.087	27.306	77.7	0.274	275	1.397	34.100	27.318	76.6	0.276								
300	1.784	34.172	27.348	73.8	0.294	300	1.676	34.161	27.347	73.8	0.295								
350	1.867	34.221	27.381	70.6	0.330	350	1.817	34.214	27.379	70.8	0.332								
400	2.084	34.291	27.420	66.9	0.365	400	2.095	34.296	27.423	66.6	0.367								
450	2.130	34.336	27.452	63.9	0.399	450	2.141	34.338	27.453	63.8	0.400								
500	2.147	34.382	27.488	60.5	0.451	500	2.162	34.380	27.485	60.8	0.452								
550	2.250	34.422	27.511	58.3	0.462	550	2.330	34.447	27.525	57.0	0.463								
600	2.265	34.462	27.542	55.4	0.492	600	2.235	34.467	27.548	54.8	0.493								
650	2.234	34.494	27.570	52.7	0.521	650	2.268	34.489	27.563	53.3	0.521								
700	2.317	34.530	27.592	50.6	0.548	700	2.334	34.529	27.590	50.8	0.549								
750	2.289	34.555	27.614	48.5	0.575	750	2.289	34.548	27.609	49.0	0.576								
800	2.247	34.577	27.635	46.5	0.601	800	2.268	34.561	27.621	47.9	0.602								
850	2.245	34.607	27.659	44.2	0.625	850	2.242	34.581	27.639	46.2	0.628								
900	2.282	34.623	27.669	43.3	0.650	900	2.292	34.599	27.649	45.2	0.653								
921	2.296	34.630	27.673	42.9	0.660	950	2.298	34.625	27.669	43.3	0.677								
						1000	2.359	34.646	27.683	42.0	0.701								
						1100	2.160	34.657	27.706	39.8	0.788								
						1200	2.076	34.669	27.722	38.2	0.792								
						1300	2.003	34.686	27.742	36.4	0.826								
						1400	2.006	34.704	27.756	35.1	0.878								
						1500	1.907	34.707	27.766	34.1	0.919								
						1600	1.875	34.720	27.779	32.9	0.959								
						1700	1.904	34.743	27.795	31.4	0.998								
						1800	1.802	34.737	27.798	31.1	1.037								
						1900	1.769	34.747	27.809	30.1	1.075								
						2000	1.605	34.735	27.812	29.8	1.112								
						2100	1.605	34.748	27.822	28.8	1.149								
						2200	1.511	34.743	27.825	28.6	1.165								
						2300	1.401	34.737	27.828	28.3	1.221								
						2400	1.302	34.730	27.829	28.1	1.256								
						2500	1.260	34.730	27.832	27.8	1.291								
						2600	1.154	34.723	27.834	27.7	1.326								
						2700	1.055	34.720	27.838	27.3	1.359								
						2800	0.984	34.716	27.840	27.1	1.392								
						2900	0.896	34.711	27.841	27.0	1.425								
						3000	0.823	34.708	27.844	26.8	1.457								
						3100	0.736	34.702	27.844	26.7	1.488								
						3200	0.677	34.698	27.845	26.7	1.519								
						3300	0.590	34.695	27.848	26.4	1.549								
						3400	0.529	34.690	27.847	26.4	1.578								
						3500	0.475	34.690	27.851	26.1	1.607								
						3600	0.413	34.685	27.850	26.2	1.646								
						3700	0.360	34.684	27.852	26.0	1.664								
						3800	0.326	34.683	27.853	25.8	1.691								
						3900	0.288	34.681	27.854	25.8	1.718								
						4000	0.261	34.680	27.855	25.7	1.745								
						4100	0.219	34.678	27.855	25.7	1.771								
						4200	0.202	34.677	27.856	25.7	1.797								
						4300	0.186	34.676	27.856	25.6	1.822								
						4400	0.183	34.674	27.854	25.8	1.848								
						4500	0.172	34.673	27.854	25.8	1.874								
						4600	0.170	34.672	27.853	25.9	1.899								
						4700	0.163	34.670	27.852	26.0	1.925								
						4800	0.155	34.668	27.851	26.1	1.951								
						4900	0.141	34.669	27.852	26.0	1.976								
						5000	0.126	34.667	27.852	26.0	2.001								
						5100	0.102	34.665	27.851	26.1	2.026								
						5200	0.113	34.665	27.851	26.1	2.051								
						5210	0.116	34.664	27.850	26.2	2.056								

RV MELVILLE										INDOURED LEG XIII									
LATITUDE	LONGITUDE	MO/DAY/YR	MESSANGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES									
48 27.4S	30 05.2W	11/27/78	0508	0925	GMT	5058M	32U	20KT	6	49	49								
4	T	S	02	P04	S103	N02	N03	DT	Z	I	S	02	SIGT	UT	DD				
1	5.47	34.051	7.51	1.27	2.	0.19	17.8	117.1	0	5.47	34.051	7.51	26.891	117.1	0.000				
26	5.30	34.063	7.51	1.34	2.	0.19	18.2	114.3	10	5.41	34.050	7.51	26.896	116.6	0.012				
62	4.28	34.074	7.09	1.63	9.	0.18	22.4	102.6	20	5.84	34.056	7.51	26.909	115.3	0.023				
93	3.16	34.025	7.22	1.75	12.	0.18	24.3	95.8	30	5.22	34.067	7.46	26.933	113.1	0.035				
124	3.65	34.125	6.92	1.76	12.	0.10	25.0	92.6	50	4.69	34.075	7.22	27.000	106.8	0.057				
155	3.29	34.100	6.83	1.80	14.	0.07	25.6	90.7	75	3.73	34.047	7.14	27.078	99.3	0.083				
185	3.09	34.111	6.96	1.85	15.	0.03	26.3	88.7	100	3.24	34.047	7.16	27.125	94.9	0.107				
216	2.74	34.096	6.94	1.87	17.	0.03	26.6	86.8	125	3.64	34.126	6.92	27.149	92.6	0.131				
246	2.38	34.080	6.96	1.91	19.	0.03	27.2	85.2	150	3.87	34.115	6.84	27.167	90.9	0.154				
287	2.57	34.126	6.60	1.98	22.	0.02	28.3	63.2	200	2.93	34.106	6.95	27.201	87.7	0.199				
338	2.58	34.156	6.51	2.07	26.	0.02	29.4	81.0	250	2.89	34.085	6.95	27.230	85.0	0.243				
399	2.691	34.224	5.77	2.19	34.	0.02	31.1	76.8	300	2.57	34.134	6.52	27.259	82.7	0.286				
470	2.563	34.267	5.36	2.29	40.	0.02	32.2	72.5	400	2.69	34.226	5.76	27.317	76.7	0.367				
552	2.493	34.330	4.95	2.35	49.	0.02	33.5	67.2	500	2.92	34.290	5.20	27.382	70.5	0.443				
643	2.623	34.408	4.58	2.40	57.	0.01	34.1	62.3	600	2.56	34.374	4.75	27.446	64.5	0.514				
736	2.79	34.448	4.17	2.44	64.	0.04	34.3	58.1	700	2.54	34.434	4.31	27.496	59.7	0.580				
844	2.687	34.517	4.17	2.44	69.	0.02	34.4	53.0	800	2.48	34.489	4.17	27.545	55.0	0.641				
911A	2.54	34.560	4.19	2.32	71.	0.01	33.8	50.1	1000	2.53	34.593	4.15	27.624	47.6	0.754				
1050	2.517	34.609	4.15	2.35	73.	0.02	33.4	46.2	1200	2.54	34.682	4.26	27.694	41.0	0.856				
1102A	2.50	34.633	4.13	2.30	75.	0.01	32.9	44.3	1500	2.37	34.755	4.45	27.767	34.0	0.991				
1197A	2.54	34.68	4.26	2.22	78.	0.00	31.9	41.1	1750	2.84	34.777	4.69	27.787	32.2	1.096				
1293A	2.53	34.70	4.29	2.12	73.	0.01	31.1	39.3	2000	2.17	34.783	4.78	27.806	30.4	1.199				
1388A	2.39	34.713	4.33	2.19	77.	0.01	31.3	37.4	2250	1.88	34.779	4.77	27.826	28.4	1.298				
1530A	2.37	34.766	4.49	2.10	76.	0.01	30.4	33.2	2500	1.47	34.741	4.51	27.825	28.5	1.391				
1672A	2.37	34.770	4.61	2.03	74.	0.00	29.3	32.9	2750	1.25	34.727	4.75	27.830	28.1	1.481				
1814A	2.31	34.781	4.79	2.00	75.	0.02	29.0	31.6	3000	1.04	34.718	4.81	27.836	27.3	1.568				
1955A	2.21	34.783	4.77	2.00	77.	0.01	28.8	30.6	3250	0.81	34.707	4.88	27.843	26.8	1.650				
2144A	2.03	34.78	4.80	2.03	82.	0.00	29.2	29.5	3500	0.60	34.698	4.96	27.845	26.6	1.727				
2334A	1.75	34.775	4.72	2.10	94.	0.00	30.2	27.8	3750	0.40	34.684	5.09	27.849	26.3	1.800				
2520A	1.443	34.736	4.49	2.19	104.	0.01	31.4	26.6	4000	0.28	34.678	5.14	27.852	26.0	1.869				
2708A	1.282	34.728	4.71	2.21	110.	0.01	31.5	28.1	4250	0.20	34.674	5.18	27.853	25.9	1.935				
2896A	1.144	34.722	4.77	2.23	114.	0.00	31.5	27.7	4500	0.17	34.671	5.20	27.852	26.0	2.000				
3130A	0.909	34.713	4.86	2.28	119.	0.01	32.1	26.9	4750	0.16	34.670	5.26	27.851	26.1	2.065				
3365A	0.722	34.700	4.90	2.25	122.	0.02	32.4	26.8	5000	0.17	34.668	5.21	27.850	26.2	2.129				
3600A	0.511	34.688	5.01	2.32	126.	0.01	32.6	26.5											
3834A	0.352	34.681	5.12	2.35	128.	0.01	32.6	26.1											
4069A	0.251	34.676	5.14	2.33	130.	0.02	32.6	26.0											
4305A	0.190	34.673	5.19	2.32	131.	0.00	32.8	25.9											
4539A	0.173	34.670	5.20	2.32	131.	0.00	32.7	26.0											
4775A	0.163	34.669	5.26	2.32	131.	0.00	32.9	26.1											
4964A	0.168	34.668	5.22	2.32	130.	0.02	32.9	26.2											

RV MELVILLE										INDOURED LEG XIII					
LATITUDE	LONGITUDE	MO/DAY/YR	MESSANGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES					
47 38.7S	25 01.1W	11/27/78	1517	1850	GMT	4526M	31U	28KT	1	310	10	10			
4	T	S	02	P04	S103	N02	N03	DT	Z	I	S	02	SIGT	UT	DD
1	4.36	33.977	7.36U	1.51	6.	0.24	20.5	110.7	0	4.36	33.977	7.51	26.958	110.7	0.000
32	4.34	33.979	7.52	1.53	6.	0.29	20.7	110.4	10	4.36	33.978	7.51	26.959	110.7	0.011
67	4.29	33.985	7.50	1.52	6.	0.26	20.8	109.4	20	4.35	33.979	7.52	26.960	110.6	0.022
101	3.14	34.043	7.13	1.81	13.	0.12	25.0	94.2	30	4.34	33.980	7.52	26.962	110.4	0.033
131	3.03	34.081	7.07	1.81	15.	0.05	25.6	90.4	50	4.31	33.985	7.51	26.967	109.9	0.055
161	2.97	34.098	7.00	1.87	15.	0.05	26.1	88.6	75	4.02	33.997	7.41	27.009	105.9	0.082
191	2.89	34.114	6.71	1.98	19.	0.04	27.2	86.7	100	3.17	34.042	7.14	27.127	94.7	0.108
222	2.69	34.125	6.57	2.00	21.	0.04	27.9	84.2	125	3.05	34.080	7.07	27.169	90.7	0.181
252	2.49	34.136	6.36	2.05	25.	0.04	29.0	81.8	150	2.99	34.094	7.04	27.185	89.2	0.154
281	2.45	34.163	6.10	2.13	29.	0.03	30.1	79.4	200	2.84	34.119	6.67	27.218	86.0	0.198
312	2.31	34.169	6.00	2.16	30.	0.03	30.5	77.9	250	2.50	34.136	6.38	27.261	82.0	0.241
351	2.00	34.162	6.04	2.18	33.	0.04	30.8	76.1	300	2.58	34.170	6.02	27.299	78.4	0.282
391	2.23	34.218	5.56	2.27	38.	0.04	31.9	73.6	400	2.24	34.225	5.52	27.354	73.1	0.359
441	2.28	34.257	5.29	2.32	43.	0.03	32.7	71.0	500	2.36	34.314	4.93	27.416	67.3	0.431
500	2.36	34.314	4.93	2.36	50.	0.04	33.6	67.3	600	2.44	34.395	4.52	27.473	61.9	0.499
574	2.42	34.372	4.62	2.43	56.	0.03	34.5	63.4	700	2.48	34.474	4.20	27.533	56.2	0.561
648	2.47	34.435	4.36	2.45	62.	0.03	34.7	59.0	800	2.46	34.526	4.13	27.576	52.1	0.6

28
LATITUDE LONGITUDE MO/DAY/YR START TIME
48 28.4S 34 05.3W 11/27/78 0835 GMT

Z	T	S	SIGMA	T	DT	DU
0	5.430	34.040	26.887	117.5	0.000	
10	5.437	34.059	26.901	116.1	0.012	
20	5.421	34.061	26.905	115.8	0.023	
30	5.267	34.056	26.919	114.4	0.035	
40	5.180	34.053	26.927	113.7	0.046	
50	4.386	34.020	26.990	107.7	0.057	
75	3.894	34.088	27.095	97.8	0.083	
100	3.388	34.075	27.134	94.0	0.107	
125	3.644	34.126	27.150	92.5	0.131	
150	3.476	34.153	27.172	90.4	0.154	
175	2.909	34.088	27.189	88.9	0.177	
200	2.906	34.108	27.205	87.5	0.199	
225	2.860	34.116	27.215	86.3	0.221	
250	3.066	34.154	27.227	85.2	0.243	
275	3.022	34.169	27.245	85.7	0.264	
300	2.945	34.174	27.254	82.7	0.286	
350	2.654	34.180	27.284	79.8	0.327	
400	2.647	34.217	27.314	76.9	0.366	
450	2.627	34.250	27.342	74.3	0.407	
500	2.528	34.274	27.370	71.7	0.444	
550	2.549	34.321	27.406	68.3	0.481	
600	2.529	34.364	27.442	64.9	0.516	
650	2.630	34.416	27.475	61.6	0.549	
700	2.548	34.431	27.494	60.0	0.581	
750	2.498	34.461	27.522	57.3	0.613	
800	2.502	34.502	27.354	54.2	0.643	
850	2.455	34.527	27.377	52.0	0.672	
900	2.498	34.556	27.398	50.1	0.700	
950	2.604	34.588	27.614	48.5	0.727	
1000	2.545	34.593	27.623	47.7	0.754	
1050	2.520	34.610	27.639	46.2	0.780	

RV MELVILLE

INDOMED LEG XIII

30

Z	T	S	O2	PO4	SiO3	NO2	NO3	DT	Z	T	S	O2	SiO3	DT	DOMINANT WAVES			
															310	10	7	
0	5.68	34.026	7.26	1.35	6.	0.19	19.2	121.4	0	5.68	34.026	7.26	26.846	121.4	0.000			
20	5.65	34.050	7.35	1.39	6.	0.20	19.3	119.2	10	5.66	34.042	7.31	26.859	120.1	0.012			
51	5.61	34.048		1.41	6.	0.19	19.4	118.9	20	5.65	34.050	7.35	26.868	119.2	0.024			
71	5.60	34.048	7.22	1.38	6.	0.20	19.4	118.8	30	5.64	34.050	7.32	26.869	119.1	0.036			
102	5.01	34.121	6.74	1.56	8.	0.17	21.5	106.7	50	5.61	34.049	7.27	26.871	118.9	0.060			
132	4.28	34.163	6.76	1.75	11.	0.03	24.9	95.9	75	5.55	34.057	7.15	26.885	117.6	0.090			
168	4.09	34.163	6.68	1.80	12.	0.02	25.6	94.0	100	5.06	34.116	6.77	26.990	107.7	0.118			
204	3.94	34.165	6.60	1.83	13.	0.01	26.1	92.4	125	4.43	34.157	6.76	27.092	98.0	0.144			
243	3.66	34.154	6.75	1.84	14.	0.01	26.2	90.6	150	4.19	34.164	6.75	27.124	95.0	0.169			
293	3.46	34.159	6.52	1.92	17.	0.01	27.3	88.3	200	3.96	34.166	6.60	27.149	92.6	0.216			
353	3.13	34.153	6.50	1.95	20.	0.00	28.0	85.9	250	3.63	34.155	6.73	27.174	90.2	0.263			
413	2.906	34.166	6.30	2.07	24.	0.01	29.1	82.9	300	5.42	34.159	6.52	27.197	88.1	0.309			
483	2.693	34.179	6.06	2.14	29.	0.01	30.2	79.8	400	2.95	34.164	6.35	27.244	85.6	0.397			
553	2.511	34.214	5.76	2.23	35.	0.00	31.4	76.3	500	2.60	34.187	6.00	27.293	79.0	0.581			
632	2.590	34.280	5.26	2.34	43.	0.00	32.8	71.7	600	2.36	34.253	5.47	27.350	73.6	0.560			
712	2.608	34.334	4.88	2.35	50.	0.00	33.7	67.8	700	2.61	34.327	4.95	27.405	68.4	0.635			
801	2.620	34.340	4.54	2.43	57.	0.00	34.3	62.9	800	2.62	34.400	4.54	27.462	62.9	0.704			
885A	2.60	34.461	4.33	2.39	63.	0.00	34.7	58.1	1000	2.54	34.506	4.14	27.553	54.3	0.832			
1003	2.539	34.506	4.14	2.44	68.	0.01	34.8	54.2	1200	2.46	34.611	4.10	27.643	45.7	0.945			
1085A	2.50	34.558	4.08	2.38	72.	0.00	34.3	50.0	1500	2.45	34.710	4.33	27.725	38.0	1.093			
1233A	2.46	34.623	4.11	2.33	75.	0.00	33.7	44.7	1750	2.41	34.768	4.57	27.774	33.3	1.205			
1385A	2.50	34.689	4.21E	2.15	74.	0.00	32.1	40.1	2000	2.33	34.794	4.85	27.801	30.8	1.311			
1532A	2.43	34.715	4.36E	2.18	75.	0.00	31.5	37.5	2250	2.05	34.785	4.81	27.817	29.2	1.413			
1681A	2.44	34.755	4.51	2.09	73.	0.00	30.1	34.6	2500	1.70	34.759	4.79	27.824	28.6	1.511			
1830A	2.38	34.782	4.65	2.02	72.	0.00	29.4	32.1	2750	1.34	34.731	4.64	27.827	28.3	1.604			
1978A	2.35	34.794	4.85	1.97	69.	0.00	28.6	30.9	3000	1.09	34.717	4.79	27.833	27.8	1.692			
2127A	2.17	34.788	4.80	1.99	75.	0.00	28.8	30.0	3250	0.81	34.704	4.84	27.840	27.1	1.776			
2276A	2.02	34.784	4.82	2.00	80.	0.00	29.2	29.1	3500	0.62	34.693	4.97	27.844	26.7	1.854			
2429A	1.80	34.769	4.85	2.07	87.	0.00	29.9	28.6	3750	0.42	34.685	5.05	27.849	26.3	1.928			
2579A	1.602	34.750	4.71	2.14	95.	0.00	30.9	28.7	4000	0.24	34.677	5.23	27.854	25.8	1.996			

RV MELVILLE

INDOMED LEG XIII

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Z	T	S	O2	PO4	SiO3	NO2	NO3	DT	Z	T	S	O2	SiO3	DT	DOMINANT WAVES			
															310	10	10	
2	6.27	34.140	7.11	1.30	5.	0.25	17.8	119.9	0	6.27	34.140	7.11	26.861	119.9	0.000			
27	6.28	34.139	7.15	1.32	5.	0.25	18.0	120.1	10	6.27	34.140	7.12	26.860	120.0	0.012			
53	6.29	34.140	7.08	1.33	5.	0.25	18.0	120.2	20	6.28	34.140	7.14	26.859	120.1	0.024			
82	6.20	34.137	7.09	1.34	6.	0.26	18.3	119.3	30	6.28	34.140	7.14	26.859	120.1	0.036			
113	5.74	34.116	7.10	1.42	7.	0.26	19.3	115.3	50	6.29	34.141	7.09	26.859	120.1	0.060			
143	5.21	34.128	7.06	1.51	8.	0.22	20.4	108.4	75	6.22	34.139	7.09	26.866	119.5	0.090			
173	4.38	34.126	7.12	1.62	9.	0.03	22.5	99.7	100	5.96	34.125	7.10	26.888	117.4	0.120			
203	4.23	34.117	7.19	1.64	10.	0.02	22.7	98.9	125	5.55	34.121	7.08	26.935	112.8	0.149			
237	4.10	34.128	6.96	1.73	11.	0.02	24.1	96.8	150	5.00	34.129	7.07	27.007	106.1	0.177			
272	3.92	34.155	6.53	1.84	14.	0.02	26.2	93.0	200	4.25	34.119	7.19	27.082	98.9	0.229			
312	3.61	34.157	6.53	1.89	16.	0.01	27.1	89.9	250	4.04	34.139	6.81	27.120	95.4	0.279			
351	3.48	34.160	6.43	1.94	18.	0.01	27.7	88.5	300	3.70	34.159	6.55	27.170	90.6	0.327			
400	3.28	34.160	6.32	1.96	20.	0.02	28.3	86.6	400	3.28	34.160	6.32	27.212	86.6	0.318			
459	2.97	34.163	6.20	2.06	24.	0.02	29.3	83.7	500	2.80	34.175	6.07	27.267	81.5	0.305			
528	2.71	34.184	5.96	2.15	30.	0.01	30.5	79.9	600	2.58	34.214	5.68	27.317	76.7	0.387			
605	2.58	34.216	5.66	2.22	35.	0.02	31.6	76.5	700	2.65	34.299	5.07	27.378	70.9	0.664			
692	2.65	34.291	5.11	2.33	44.	0.01	33.1	71.4	800	2.65	34.376	5.66	27.440	65.0	0.737			
765A	2.65	34.426	4.44	2.45	60.	0.01	35.2	61.0	1000	2.58	34.481	6.18	27.530	56.5	0.869			
881	2.63	34.426	4.44	2.45	60.	0.01	35.2	61.0	1200	2.55	34.606	6.01	27.632	46.9	0.985			
968A	2.59	34.456	4.25	2.67U	62.	0.03	34.6	58.4	1500	2.52	34.688	6.23	27.700	40.3	1.139			
1063A	2.57								1750	2.43	34.743	6.45	27.752	35.4	1.257			
1162A	2.56	34.591	4.00	2.32	70.	0.00	33.9	48.0	2000	2.30	34.765	6.59	27.781	32.7	1.368			
1312A	2.536	34.635	4.09	2.33	72.	0.00	32.9	44.4	2250	2.14	34.778	6.72	27.805	30.4	1.474			
1462A	2.528	34.678	4.20	2.27	72.	0.00	32.1	41.1	2500	1.93	34.778	6.75	27.822	28.8	1.575			
1609A	2.475	34.712	4.31	2.21	73.	0.00	31.4	38.1	2750	1.53	34.745	6.69	27.825	28.6	1.673			
1759A	2.426	34.745	4.46	2.14	73.	0.00	30.5	35.2	3000	1.22	34.727	6.72	27.832	27.8	1.764			
1908A	2.336	34.755	4.50	2.13	74.	0.00	30.0	33.8	3250	0.98	34.713	6.79						

RV MELVILLE

INOUNED LEG XIII

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LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
46 13.0S	18 05.5W	11/30/78	1634 2047	6MT	3841M	280	20KT	2	280 7 6						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	UT	DD
1	7.13	34.206	7.01	1.19	4.	0.22	15.8	125.9	0	7.13	34.206	7.01	26.797	125.9	0.000
32	7.14	34.206	7.00	1.19	4.	0.22	15.9	126.1	10	7.13	34.207	7.01	26.797	126.0	0.013
62	7.13	34.209	6.89	1.19	4.	0.21	15.9	125.7	20	7.14	34.207	7.00	26.797	126.0	0.025
93	6.87	34.211	6.90	1.24	4.	0.23	16.3	122.2	30	7.14	34.207	7.00	26.796	126.1	0.038
123	6.05	34.260	6.93	1.33	5.	0.09	18.1	108.0	50	7.13	34.209	6.93	26.798	125.9	0.063
148P	5.44	34.228	6.92	1.41	6.	0.03	19.6	103.5	75	7.07	34.210	6.89	26.803	124.9	0.095
181P	5.01	34.195	6.92	1.52	7.	0.01	21.3	101.2	100	6.70	34.225	6.91	26.871	119.0	0.126
213P	4.64	34.201	6.83	1.65	10.	0.01	23.2	96.8	125	5.98	34.259	6.93	26.992	107.5	0.154
245P	4.32	34.188	6.47	1.75	11.	0.01	24.8	94.4	150	5.41	34.226	6.92	27.036	103.3	0.181
285P	3.904	34.168	6.50	1.83	13.	0.01	26.1	91.8	200	4.78	34.198	6.76	27.086	98.5	0.233
325P	3.665	34.161	6.58	1.85	14.	0.01	26.6	90.1	250	4.26	34.186	6.47	27.133	94.1	0.282
365P	3.424	34.157	6.67	1.90	16.	0.01	27.2	88.2	300	3.80	34.165	6.54	27.165	91.1	0.329
425P	3.221	34.155	6.38	1.94	19.	0.01	27.8	86.5	400	3.30	34.156	6.42	27.206	87.2	0.421
486P	2.972	34.165	6.17	2.02	23.	0.00	29.1	83.6	500	2.92	34.169	6.12	27.251	82.9	0.509
546P	2.781	34.182	5.96	2.11	27.	0.01	30.1	80.7	600	2.70	34.203	5.79	27.298	78.5	0.593
606P	2.700	34.205	5.77	2.15	31.	0.00	30.5	78.3	700	2.66	34.261	5.35	27.348	73.7	0.673
666P	2.656	34.240	5.50	2.23	36.	0.00	31.9	75.3	800	2.66	34.322	4.91	27.396	69.1	0.749
825P	2.657	34.337	4.81	2.35	49.	0.01	33.8	67.9	1000	2.68	34.460	4.20	27.509	58.5	0.887
937A	2.67	34.422	4.39	2.35	58.	0.00	34.5	61.6	1200	2.58	34.561	4.05	27.595	50.4	1.009
1109A	2.57	34.516	4.00	2.37	69.	0.00	34.6	53.7	1500	2.32	34.675	4.27	27.669	41.4	1.170
1232A	2.58	34.575	4.07	2.29	71.	0.00	33.8	49.3	1750	2.68	34.767	4.66	27.750	35.7	1.291
1356A	2.55	34.625	4.18	2.29	73.	0.00	33.2	45.3	2000	2.46	34.782	4.76	27.780	32.7	1.404
1479A	2.50	34.664	4.23	2.25	75.	0.00	32.7	41.9	2250	2.22	34.781	4.74	27.800	30.9	1.513
1603A	2.65	34.721	4.68	2.12	67.	0.00	30.9	38.9	2500	1.94	34.772	4.79	27.816	29.4	1.616
1726A	2.68	34.760	4.64	2.01	65.	0.00	29.5	36.2	2750	1.65	34.754	4.76	27.824	28.7	1.713
1850A	2.63	34.783	4.73	1.97	65.	0.00	28.7	34.0	3000	1.27	34.722	4.74	27.825	26.6	1.809
1972A	2.48	34.779	4.74	1.97	70.	0.00	28.9	33.1	3250	1.03	34.712	4.83	27.833	27.8	1.898
2071A	2.42	34.790	4.79	1.96	71.	0.00	28.6	31.8	3500	0.74	34.698	4.92	27.840	27.1	1.982
2169A	2.311	34.782	4.76	1.96	75.	0.00	28.9	31.5	3750	0.57	34.689	5.05	27.843	26.8	2.059
2293A	2.177	34.781	4.74	1.97	78.	0.00	28.8	30.5							
2439A	2.004	34.774	4.77	2.02	83.	0.00	29.3	29.8							
2587A	1.846	34.769	4.80	2.04	88.	0.01	29.6	29.0							
2734A	1.676	34.757	4.76	2.07	94.	0.00	30.0	28.6							
2882A	1.431	34.732	4.73	2.18	105.	0.00	31.3	28.8							
3028A	1.242	34.720	4.74	2.22	110.	0.00	31.6	28.5							
3175A	1.069	34.714	4.81	2.24	114.	0.00	31.9	28.0							
3323A	0.960	34.708	4.84	2.24	118.	0.01	32.2	27.6							
3468A	0.774	34.699	4.90	2.26	120.	0.00	31.9	27.2							
3615A	0.646	34.692	4.98	2.28	122.	0.00	32.3	26.9							
3763A	0.566	34.688	5.06	2.25	123.	0.00	32.3	26.8							

RV MELVILLE

INOUNED LEG XIII

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LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
45 58.4S	17 09.0W	12/ 1/78	0511 1406	GMT	3507M	240	20KT	1	230 9 9						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	UT	DD
2	7.06	34.215	7.00	1.19	4.	0.21	16.5	124.3	0	7.06	34.215	7.00	26.814	124.3	0.000
26	7.04	34.215	7.01	1.18	4.	0.21	16.6	124.1	10	7.05	34.216	7.00	26.816	124.2	0.012
52	7.05	34.215	6.92	1.14	4.	0.19	16.6	124.2	20	7.04	34.216	7.01	26.817	124.1	0.025
81	7.02	34.222	6.87	1.14	4.	0.18	16.6	123.3	30	7.04	34.216	7.01	26.817	124.1	0.037
111	6.68	34.304	6.66	1.30	5.	0.10	18.0	112.8	50	7.05	34.216	6.93	26.816	124.2	0.062
141	5.87	34.252	6.88	1.36	6.	0.03	19.3	106.7	75	7.03	34.221	6.88	26.823	123.5	0.094
170	5.52	34.227	6.95	1.42	6.	0.01	20.2	104.5	100	6.85	34.278	6.72	26.892	117.0	0.124
200	5.05	34.202	6.83	1.51	8.	0.01	21.6	101.1	125	6.30	34.286	6.75	26.972	109.4	0.153
229	4.59	34.199	6.33	1.72	11.	0.01	25.6	96.4	150	5.74	34.244	6.90	27.009	105.9	0.180
259	4.25	34.182	6.37	1.77	12.	0.00	26.7	94.2	200	5.05	34.202	6.83	27.060	101.1	0.233
298	3.97	34.171	6.39	1.84	14.	0.01	27.3	92.2	250	4.34	34.189	6.86	27.127	98.7	0.283
338	3.78	34.164	6.41	1.88	14.	0.01	27.4	90.9	300	3.96	34.171	6.89	27.154	92.2	0.331
388	3.59	34.163	6.36	1.83	16.	0.02	27.8	89.2	400	3.54	34.164	6.86	27.189	88.8	0.424
447	3.36	34.165	6.33	1.96	19.	0.02	28.6	87.0	500	3.14	34.166	6.20	27.231	88.9	0.514
516	3.08	34.169	6.14	2.00	22.	0.01	29.6	84.2	600	2.90	34.201	5.79	27.278	80.3	0.600
595	2.92	34.199	5.80	2.12	29.	0.00	31.0	80.6	700	2.69	34.243	5.44	27.331	75.3	0.682
683	2.68	34.228	5.53	2.16	35.	0.00	32.1	76.4	800	2.70	34.309	4.96	27.383	70.5	0.759
777	2.71	34.303	5.02	2.30	44.	0.00	33.6	71.0	1000	2.64	34.433	4.38	27.487	68.6	0.901
875A	2.66	34.327	4.81	2.21U	48.	0.00	34.4	68.7	1200	2.56	34.526	4.14	27.570	52.8	1.027
975	2.64	34.416	4.64	2.38	58.	0.00	34.9	61.8	1500	2.51	34.645	4.19	27.667	43.5	1.195
1073A	2.626								1750	2.52	34.727	4.37	27.732	37.3	1.319
1172A	2.550	34.511	4.15	2.36	68.	0.00	35.4	53.9	2000	2.54	34.783	4.71	27.775	38.2	1.435
1321A	2.613	34.593	4.12	2.35	70.	0.00	34.7	48.2	2250	2.37	34.795	4.82	27.799	30.7	1.345
1472A	2.515	34.635	4.18	2.33	74.	0.00	34.1	44.3	2500	2.04	34.782	4.78	27.816	29.3	1.650
1617A	2.488	34.683	4.21	2.26	75.	0.00	33.2	40.4	2750	1.70	34.757	4.71	27.822	28.8	1.750
1761A	2.525	34.733	4.40	2.10	71.	0.01	31.4	36.9	3000	1.36					

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LATITUDE 45 58.5S	LONGITUDE 17 19.2W	MO/DAY/YR 12/01/78	INDOMED LEG XIII CTD		
			SIGMA 1	DT	DD
0	7.118	34.211	26.803	125.4	0.000
10	7.105	34.215	26.808	124.9	0.015
20	7.107	34.215	26.808	125.0	0.025
30	7.090	34.215	26.810	124.6	0.038
40	7.079	34.214	26.811	124.7	0.050
50	7.067	34.214	26.812	124.5	0.063
75	6.975	34.212	26.824	123.5	0.094
100	6.719	34.262	26.898	116.4	0.124
125	6.380	34.352	26.998	106.9	0.153
150	6.050	34.302	27.017	105.1	0.179
175	5.657	34.271	27.042	102.6	0.206
200	5.390	34.264	27.069	100.2	0.232
225	4.669	34.198	27.100	97.3	0.251
250	4.380	34.190	27.125	94.9	0.282
275	4.142	34.177	27.140	93.5	0.306
300	3.937	34.170	27.155	92.0	0.330
350	3.685	34.162	27.174	90.2	0.377
400	3.464	34.161	27.195	88.2	0.423
450	3.331	34.165	27.211	86.7	0.460
500	3.096	34.168	27.235	84.4	0.513
550	2.964	34.179	27.256	82.5	0.556
600	2.920	34.204	27.280	80.2	0.598
650	2.882	34.230	27.308	77.6	0.640
700	2.732	34.245	27.329	75.5	0.680
750	2.729	34.281	27.358	72.8	0.719
800	2.711	34.314	27.386	70.1	0.757
850	2.695	34.341	27.409	68.0	0.794
900	2.678	34.376	27.436	65.2	0.830
950	2.676	34.405	27.462	63.0	0.865
1000	2.660	34.433	27.485	60.7	0.899
1100	2.593	34.483	27.531	56.4	0.963
1200	2.565	34.537	27.577	52.1	1.024
1300	2.608	34.577	27.605	49.4	1.082
1400	2.565	34.609	27.634	46.6	1.138
1500	2.519	34.640	27.663	43.9	1.192
1600	2.502	34.678	27.694	40.9	1.243
1700	2.528	34.717	27.723	38.2	1.292
1800	2.520	34.743	27.745	36.1	1.340
1900	2.556	34.772	27.765	34.2	1.386
2000	2.539	34.786	27.777	33.0	1.431
2100	2.472	34.794	27.789	31.9	1.475
2200	2.414	34.795	27.795	31.4	1.519
2300	2.333	34.799	27.805	30.4	1.562
2400	2.188	34.791	27.811	29.9	1.605
2500	2.032	34.781	27.816	29.4	1.646
2600	1.940	34.772	27.816	29.4	1.687
2700	1.814	34.765	27.820	29.0	1.720
2800	1.630	34.747	27.819	29.1	1.767
2900	1.471	34.737	27.823	28.7	1.806
3000	1.377	34.723	27.826	28.4	1.844
3100	1.274	34.728	27.830	28.1	1.880
3200	1.145	34.721	27.833	27.8	1.916
3300	1.075	34.720	27.837	27.4	1.951
3400	1.037	34.717	27.837	27.4	1.986
3464	1.022	34.717	27.838	27.3	2.008

HV MELVILLE

INBOUND LEG XIII

54

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
45 34.4S	15 07.6W	12/ 1/78	2356 0344	GMT	3553M	23U	27KT	1	1						
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	S107	UT	DD
1	6.53	34.160	7.15	1.27	5.	0.21	17.5	121.6	0	6.53	34.160	7.15	26.843	121.6	0.000
21	6.51	34.161	7.11	1.28	5.	0.21	17.8	121.3	10	6.52	34.162	7.13	26.845	121.5	0.012
53	6.51	34.159	7.05	1.29	5.	0.21	17.8	121.5	20	6.51	34.162	7.11	26.846	121.3	0.024
78	6.30	34.167	7.02	1.31	5.	0.24	17.9	118.3	30	6.31	34.161	7.09	26.846	121.4	0.036
104	6.04	34.172	7.06	1.34	6.	0.23	18.4	114.7	50	6.51	34.160	7.06	26.845	121.4	0.061
139	5.29	34.140	7.14	1.44	7.	0.29	19.8	108.4	75	6.33	34.167	7.02	26.874	118.7	0.091
165	4.66	34.105	7.17	1.55	8.	0.29	21.7	104.2	100	6.09	34.173	7.05	26.910	115.3	0.121
206	4.26	34.091	7.12	1.62	9.	0.02	22.9	101.1	125	5.62	34.157	7.11	26.955	111.0	0.149
246	4.47	34.166	6.32	1.77	11.	0.02	25.5	96.1	150	5.01	34.125	7.16	27.003	106.5	0.177
287	4.01	34.173	6.34	1.86	14.	0.02	27.3	92.5	200	4.26	34.089	7.13	27.055	101.5	0.230
338	3.55	34.156	6.40	1.93	16.	0.01	27.9	89.2	250	4.44	34.188	6.32	27.116	95.7	0.280
364	3.321	34.155	6.39	1.97	18.	0.01	28.5	87.4	300	5.08	34.170	6.36	27.161	91.5	0.328
423	3.098	34.153	6.28	2.01	20.	0.01	29.0	85.6	400	5.23	34.154	6.35	27.212	86.6	0.420
485	2.864	34.156	6.17	2.04	24.	0.01	30.0	83.3	500	2.82	34.162	6.10	27.255	82.6	0.508
561	2.714	34.195	5.76	2.15	30.	0.02	31.4	79.2	600	2.68	34.222	5.98	27.314	76.9	0.590
637	2.675	34.247	5.42	2.28	37.	0.01	32.7	74.9	700	2.68	34.290	5.15	27.369	71.8	0.669
714	2.680	34.296	5.09	2.32	44.	0.01	33.6	71.1	800	2.65	34.360	4.82	27.420	66.1	0.742
815	2.645	34.368	4.76	2.42	53.	0.01	34.8	65.5	1000	2.59	34.466	4.35	27.517	57.7	0.876
844A	2.65	34.372	4.59	2.28U	52.	0.00	33.6	65.2	1200	2.54	34.574	4.10	27.607	49.1	0.996
941	2.626V	34.439	4.35	2.43	61.	0.01	35.2	1500	2.53	34.686	4.24	27.698	40.6	1.154	
942A	2.59	34.433	4.34	2.42	60.	0.01	34.6	60.1	1750	2.52	34.750	4.52	27.750	35.6	1.273
1039A	2.59	34.486	4.35	2.40	65.	0.01	34.2	56.1	2000	2.43	34.787	4.71	27.787	32.0	1.384
1137A	2.56	34.544	4.09	2.39	70.	0.01	34.2	51.5	2250	2.22	34.790	4.76	27.807	30.2	1.490
1283A	2.52	34.607	4.11	2.34	74.	0.00	33.5	46.4	2500	1.94	34.775	4.80	27.818	29.2	1.593
1430A	2.53	34.662	4.16	2.25	74.	0.00	32.4	42.3	2750	1.60	34.755	4.70	27.826	28.5	1.691
1577A	2.52	34.708	4.34	2.17	73.	0.00	31.5	38.8	3000	1.37	34.742	4.74	27.834	27.7	1.785
1724A	2.53	34.766	4.50	2.09	71.	0.00	30.2	36.0	3250	1.28	34.734	4.85	27.834	27.7	1.876
1870A	2.466	34.766	4.59	2.05	71.	0.00	29.7	34.0	3500	1.23	34.729	4.61	27.833	27.6	1.968
2018A	2.420	34.790	4.73	1.97	70.	0.00	28.7	31.8							
2165A	2.269	34.789	4.82	1.99	75.	0.00	29.0	30.7							
2313A	2.170	34.790	4.71	2.00	76.	0.00	28.9	29.9							
2459A	2.005	34.780	4.84	2.01	83.	0.00	29.5	29.3							
2608A	1.777	34.763	4.80	2.09	90.	0.00	30.0	28.9							
2758A		34.754	4.430	2.10	96.	0.00	30.5								
2907A	1.449	34.745	4.65	2.13	101.	0.00	30.9	28.0							
3057A	1.353	34.740	4.81	2.17	103.	0.01	31.2	27.6							
3210A	1.290	34.733	2.48	1.05	105.	0.01	31.2	27.8							
3360A	1.257	34.735	4.68	2.19	107.	0.00	31.5	27.5							
3463A	1.239	34.730	4.82	2.18	107.	0.02	31.4	27.7							

34 S			INBOUND LEG XIII CTD			34 D		
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	
45 32.9S	15 56.3W	12/02/78	0250 GMT	45 34.9S	15 58.0W	12/01/78	2230 GMT	
0	6.527	34.163	26.846	121.4	0.000	0	6.594	34.160
10	6.533	34.158	26.841	121.8	0.012	10	6.562	26.839
20	6.534	34.158	26.841	121.8	0.024	20	6.566	26.838
30	6.534	34.158	26.841	121.8	0.037	30	6.495	26.848
40	6.533	34.159	26.842	121.7	0.049	40	6.487	26.849
50	6.509	34.159	26.845	121.5	0.061	50	6.471	26.852
75	6.362	34.164	26.868	119.2	0.091	75	6.272	26.883
100	6.069	34.170	26.911	113.2	0.121	100	5.819	26.946
125	5.364	34.141	26.975	109.1	0.149	125	4.976	27.003
150	4.605	34.097	27.027	104.2	0.176	150	4.645	27.038
175	4.31	34.095	27.054	101.6	0.203	175	4.502	27.066
200	4.257	34.101	27.068	100.3	0.228	200	4.605	27.090
225	4.473	34.161	27.092	98.0	0.254	225	4.412	27.116
250	4.429	34.193	27.122	95.2	0.278	250	4.298	27.153
275	4.156	34.181	27.142	93.3	0.302	275	4.042	27.199
300	3.872	34.169	27.161	91.4	0.326	300	3.803	27.165
350	3.530	34.160	27.188	88.9	0.373	350	3.478	27.191
400	3.236	34.156	27.213	86.6	0.418	400	3.257	27.211
450	2.983	34.155	27.235	84.4	0.462	450	3.049	27.230
500	2.824	34.162	27.255	82.6	0.505	500	2.834	27.254
550	2.735	34.187	27.283	79.9	0.547	550	2.821	27.277
600	2.703	34.219	27.311	77.2	0.588	600	2.707	27.312
650	2.685	34.257	27.343	74.2	0.628	650	2.682	27.343
700	2.682	34.299	27.377	71.0	0.666	700	2.675	27.371
750	2.679	34.324	27.397	69.1	0.703	750	2.674	27.395
800	2.661	34.362	27.429	66.1	0.739	800	2.664	27.524
850	2.626	34.390	27.454	63.7	0.774	850	2.641	27.559
900	2.609	34.416	27.476	61.6	0.808	900	2.612	27.597
950	2.612	34.444	27.498	59.5	0.841	950	2.591	27.637
1000						1000	2.606	27.524
1100						1100	2.587	27.559
1200						1200	2.587	27.607
1300						1300	2.531	27.636
1400						1400	2.540	27.666
1500						1500	2.531	27.689
1600						1600	2.511	27.711
1700						1700	2.541	27.732
1800						1800	2.517	27.755
1900						1900	2.473	27.770
2000						2000	2.435	27.783
2100						2100	2.332	27.791
2200						2200	2.257	27.800
2300						2300	2.160	27.808
2400						2400	2.043	27.813
2500						2500	1.922	27.815
2600						2600	1.790	27.818
2700						2700	1.662	27.824
2800						2800	1.546	27.826
2900						2900	1.446	27.830
3000						3000	1.383	27.830
3100						3100	1.332	27.832
3200						3200	1.293	27.834
3300						3300	1.279	27.833
3400						3400	1.248	27.834
3500								

RV MELVILLE

INOUNED LEG XIII

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
45 28.9S	14 07.2W	12/ 2/78	0947 2156	GMT	2454M	210	30KT	1	210 9 10						
Z	T	S	O2	P04	S103	NO2	NO3	DT	Z	T	S	O2	S107	DT	DD
2	5.85	34.085	7.27	1.34	6.	0.22	19.0	119.0	0	5.85	34.085	7.27	26.871	119.0	0.000
22	5.85	34.084	7.30	1.35	6.	0.21	19.2	119.0	10	5.85	34.086	7.29	26.871	119.0	0.012
53	5.85	34.084	7.27	1.35	6.	0.21	19.2	119.0	20	5.85	34.085	7.30	26.870	119.0	0.024
77	5.76	34.104	7.18	1.36	6.	0.23	19.3	116.5	30	5.85	34.085	7.29	26.870	119.0	0.036
103	4.77	34.097	7.20	1.53	8.	0.34	21.4	105.9	50	5.85	34.085	7.27	26.870	119.0	0.060
137	4.19	34.085	7.14	1.63	10.	0.03	24.3	100.9	75	5.77	34.101	7.19	26.893	116.9	0.089
163	4.23	34.111	6.98	1.68	10.	0.00	24.1	99.3	100	4.90	34.099	7.20	26.995	107.2	0.116
203	4.05	34.127	6.82	1.76	12.	0.00	25.3	96.3	125	4.81	34.088	7.16	27.051	101.9	0.144
241	3.76	34.152	6.60	1.80	14.	0.00	27.3	91.7	150	4.21	34.100	7.06	27.071	100.0	0.170
281	3.46	34.152	6.52	1.91	17.	0.00	28.2	88.9	200	4.07	34.127	6.83	27.107	96.6	0.219
331	3.12	34.149	6.44	1.99	20.	0.00	29.2	86.1	250	3.69	34.154	6.57	27.167	90.9	0.267
375	2.89	34.157	6.22	2.04	24.	0.00	30.0	83.3	300	3.82	34.151	6.50	27.200	87.8	0.313
415	2.76	34.162	6.15	2.08	26.	0.05	30.3	82.0	400	2.80	34.161	6.16	27.255	82.5	0.400
463	2.64	34.176	6.01	2.15	29.	0.00	31.2	80.0	500	2.58	34.189	5.87	27.297	78.5	0.484
522	2.55	34.197	5.78	2.17	35.	0.00	32.0	77.7	600	2.52	34.243	5.44	27.365	74.0	0.563
569A	2.50	34.234	5.51	2.24	37.	0.00	31.9	74.5	700	2.59	34.342	4.81	27.418	67.1	0.637
647	2.61	34.284	5.13	2.31	43.	0.00	35.9	71.6	800	2.58	34.416	4.43	27.478	61.4	0.705
688A	2.59	34.330	4.87	2.37	49.	0.00	35.7	67.9	1000	2.54	34.517	4.15	27.563	53.4	0.830
787A	2.576	34.407	4.66	2.43	58.	0.00	34.2	62.0	1200	2.53	34.595	4.10	27.625	47.5	0.944
886A	2.569	34.463	4.27	2.43	64.	0.00	34.6	57.7	1500	2.45	34.705	4.20	27.720	38.6	1.096
985A	2.555	34.511	4.16	2.44	68.	0.00	34.4	53.8	1750	2.59	34.757	4.64	27.767	34.0	1.210
1086A	2.538	34.548	4.11	2.41	71.	0.00	34.6	51.0	2000	2.29	34.786	4.77	27.799	31.0	1.316
1185A	2.531	34.586	4.10	2.38	72.	0.00	34.1	48.1	2250	2.10	34.788	4.82	27.815	29.5	1.419
1309A	2.500	34.642	4.12	2.33	75.	0.00	33.2	43.6							
1433A	2.462	34.675	4.18	2.29	76.	0.00	32.5	40.8							
1597A	2.436	34.726	4.37	2.20	75.	0.00	31.9	36.7							
1683A	2.417	34.750	4.55E	2.12	74.	0.00	30.7	34.0							
1806A	2.365	34.763	4.70E	2.09	74.	0.02	30.5	33.4							
1930A	2.353	34.780	4.75	2.05	72.	0.00	29.4	32.0							
2053A	2.229	34.789 F	4.78	2.02	75.	0.00	29.1	30.3							
2177A	2.144	34.787	4.80	2.01	78.	0.02	29.1	29.8							
2300A	2.055	34.786	4.88	2.02	81.	0.00	30.0	29.2							
2422A	1.775	34.768	4.87	2.08	90.	0.00	30.0	28.5							

RV MELVILLE

INOUNED LEG XIII

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
47 46.2S	12 07.3W	12/ 3/78	0957 1236	GMT	2879M	270	25KT	1	260 8 8						
Z	T	S	O2	P04	S103	NO2	NO3	DT	Z	T	S	O2	S107	DT	DD
1	4.11	33.884	7.69	1.45	5.	0.27	20.3	115.2	0	4.11	33.884	7.69	26.911	115.2	0.000
26	4.10	33.883	7.66	1.46	5.	0.27	20.7	115.2	10	4.11	33.885	7.68	26.911	115.2	0.012
52	4.10	33.882	7.63	1.46	5.	0.17	20.5	115.3	20	4.10	33.885	7.67	26.911	115.2	0.023
77	4.10	33.884	7.57	1.45	5.	0.27	20.7	115.1	30	4.10	33.884	7.66	26.911	115.2	0.035
103	3.85	33.891	7.51	1.34	6.	0.35	21.2	112.2	50	4.10	33.882	7.63	26.910	115.3	0.056
134	3.33	33.941	7.45	1.65	11.	0.41	23.4	103.6	75	4.10	33.875	7.58	26.912	115.1	0.087
145P	3.092	33.952	7.49	1.69	12.	0.27	24.1	100.7	100	3.89	33.891	7.58	26.938	112.7	0.115
178P	2.888	33.992	7.35	1.74	13.	0.06	24.9	95.9	125	3.50	33.927	7.47	27.004	106.3	0.143
214P	2.941	34.087	6.75	1.89	17.	0.06	27.7	89.2	150	3.06	33.961	7.47	27.073	99.8	0.169
254P	2.711	34.125	6.52	1.97	20.	0.06	29.0	84.4	200	2.92	34.051	6.99	27.156	91.8	0.217
303P	2.377	34.132	6.35	2.07	24.	0.03	30.0	81.2	250	2.74	34.125	6.53	27.232	84.8	0.262
368P	2.236	34.161	6.10	2.15	30.	0.04	31.4	77.9	300	2.40	34.133	6.58	27.268	81.4	0.304
471P	2.336	34.233	5.44	2.28	39.	0.04	35.3	73.3	400	2.25	34.182	5.91	27.319	76.5	0.385
666A	2.45	34.407	4.94	2.32	60.	0.02	34.5	61.0	500	2.36	34.260	5.26	27.372	71.5	0.461
766A	2.43	34.479	4.15	2.43	68.	0.02	34.9	55.4	600	2.43	34.349	4.73	27.437	65.3	0.532
865A	2.42	34.533	4.06	2.41	73.	0.02	34.7	51.2	700	2.45	34.434	4.32	27.504	59.0	0.598
963A	2.43	34.585	4.08	2.37	75.	0.02	34.2	47.4	800	2.42	34.499	4.10	27.588	53.9	0.659
1062A	2.46	34.635	4.14	2.29	76.	0.02	35.5	43.6	1000	2.45	34.606	4.10	27.611	45.9	0.768
1162A	2.37	34.653	4.13	2.27	79.	0.01	35.2	41.7	1200	2.36	34.663	4.15	27.694	40.9	0.867
1262A	2.34	34.679	4.19	2.24	80.	0.02	32.7	39.5	1500	2.24	34.730	4.48	27.758	34.9	1.003
1411A	2.29	34.712	4.33	2.21	81.	0.01	32.0	36.6	1750	2.16	34.764	4.60	27.791	31.7	1.107
1558A	2.212	34.741	4.57	2.14	82.	0.01	31.3	35.8	2000	1.91	34.764	4.76	27.812	29.8	1.206
1707A	2.180	34.760	4.58	2.09	81.	0.01	30.5	32.2	2250	1.64	34.755	4.70	27.825	28.5	1.300
1857A	2.097	34.770	4.67	2.05	81.	0.01	30.0	30.8	2500	1.35	34.753	4.69	27.829	28.2	1.390
2004A	1.901	34.764	4.76	2.06	87.	0.02	30.3	29.7	2750	1.03	34.719	4.81	27.838	27.3	1.476
2152A	1.719	34.756	4.71	2.09	94.	0.02	30.0	29.0							
2300A	1.603	34.754	5.07U	2.11	97.	0.02	30.9	28.4							
2448A	1.412	34.735	4.69	2.19	102.	0.02	31.6	28.5							
2595A	1.226	34.729	4.68	2.20	109.	0.02	32.1	27.7							
2744A	1.041	34.719	4.61	2.22	114.	0.02	32.2	27.3							
2842A	0.941	34.713	4.63	2.22	117.	0.02	32.5	27.1							

E) OXYGEN SAMPLES AT 1683 AND 1806 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO NOW BE IN THE CORRECT ORDER.

F) AN ERROR OF -1 OHM, .058 PPT, HAS BEEN ASSUMED FOR THIS VALUE.

RV MELVILLE

INDOMED LEG XIII

LATITUDE	LONGITUDE	MO/DAY/YR	MESSANGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DUMINANT WAVES						
48 29.0S	14 07.1W	12/ 4/78	0442 U003	GMT	3471M	200	8KT	1	250 4 6						
Z	T	S	O2	P04	SI03	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
0	5.45	34.04	7.31	1.40	5.	0.24	19.7	117.7	0	5.45	34.040	7.31	26.885	117.7	0.000
41	5.43	34.03	7.33	1.41	5.	0.25	19.9	118.2	10	5.45	34.039	7.31	26.883	117.6	0.012
81	5.45	34.04	7.29	1.39	5.	0.24	19.9	117.7	20	5.44	34.036	7.32	26.882	117.9	0.024
103	5.15	34.09	7.15	1.50	8.	0.31	20.9	110.6	30	5.44	34.034	7.32	26.881	118.1	0.035
138	4.31	34.13	U	7.16	1.62	9.	0.05	26.4	50	5.43	34.033	7.32	26.880	118.1	0.059
164	4.07	34.105	7.21	1.63	10.	0.03	23.9	98.2	75	5.45	34.040	7.30	26.884	117.8	0.089
194	3.91	34.120	6.89	1.74	12.	0.02	25.9	95.5	100	5.20	34.085	7.17	26.948	111.6	0.118
229	3.59	34.136	6.67	1.86	15.	0.02	27.5	91.3	125	4.61	34.089	7.16	27.019	105.0	0.145
280	3.43	34.157	6.52	1.93	17.	0.02	28.6	88.2	150	4.17	34.094	7.18	27.070	100.1	0.171
326	3.24	34.156	6.39	1.97	19.	0.03	29.4	86.6	200	3.85	34.124	6.84	27.126	94.8	0.221
397	2.85	34.149	6.32	2.04	23.	0.03	30.3	83.8	250	3.51	34.147	6.60	27.180	89.7	0.268
426	2.72	34.155	6.24	2.07	25.	0.05	31.0	82.2	300	3.45	34.159	6.46	27.203	87.5	0.313
473	2.60	34.174	5.99	2.13	29.	0.02	32.1	79.8	400	2.84	34.150	6.31	27.243	83.6	0.401
534	2.60	34.221	5.60	2.22	35.	0.03	35.4	76.3	500	2.60	34.195	5.83	27.300	78.3	0.484
555A	2.54	34.233	5.63	2.23	36.	0.00	32.4	74.9	600	2.60	34.261	5.30	27.355	73.1	0.563
560	2.60	34.237	5.50	2.25	37.	0.02	33.8	75.0	700	2.59	34.351	4.68	27.425	66.3	0.636
616	2.60	34.273	5.22	2.29	42.	0.03	34.6	72.3	800	2.60	34.421	4.85	27.481	61.1	0.704
657A	2.59	34.317	4.92	2.33	49.	0.00	34.1	68.9	1000	2.53	34.527	4.11	27.571	52.6	0.829
758A	2.60	34.390	4.65	2.32	58.	0.01	34.7	63.5	1200	2.50	34.613	4.09	27.642	45.8	0.940
860A	2.58	34.460	4.27	2.42	65.	0.00	35.2	58.0	1500	2.43	34.704	4.26	27.721	38.4	1.089
962A	2.533	34.507	4.14	2.44	69.	0.00	35.3	54.1	1750	2.38	34.752	4.53	27.763	34.3	1.205
1064A	2.521	34.557	4.08	2.44	73.	0.00	34.9	50.2	2000	2.19	34.772	4.64	27.795	31.5	1.309
1216A	2.493	34.618	4.09	2.37	75.	0.00	34.3	45.4	2250	1.96	34.770	4.67	27.812	29.8	1.411
1368A	2.469	34.669	4.18	2.26	76.	0.01	33.0	41.3	2500	1.59	34.747	4.66	27.821	28.9	1.508
1520A	2.427	34.708	4.30	2.20	77.	0.01	32.2	38.0	2750	1.32	34.738	4.77	27.833	27.7	1.600
1673A	2.390	34.758	4.44	2.15	77.	0.01	31.1	35.5	3000	1.11	34.729	4.79	27.841	27.0	1.687
1824A	2.356	34.763	4.60	2.05	76.	0.00	30.7	33.3	3250	0.94	34.717	4.86	27.843	26.9	1.770
2277A	1.936	34.769	4.63	2.05	79.	0.01	29.8	31.5							
2428A	1.682	34.750	4.65	2.10	96.	0.03	31.2	29.2							
2579A	1.505	34.743	4.67	2.18	102.	0.01	31.7	28.5							
2729A	1.343	34.738	4.76	2.20	106.	0.00	31.9	27.8							
2878A	1.221	34.732	4.78	2.22	109.	0.01	32.1	27.4							
3028A	1.086	34.728	4.79	2.22	113.	0.03	32.4	26.9							
3177A	0.974	34.720	4.85	2.26	116.	0.00	32.5	26.8							
3425A	0.898	34.711	4.87	2.26	118.	0.00	32.9	27.0							
3424A	0.755	34.699	4.88	2.29	121.	0.01	33.1	27.0							

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				
48 29.5S	14 25.8W	12/04/78	0753 GMT	48 30.5S	14 28.2W	12/04/78	0246 GMT				
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	5.458	34.006	26.857	120.3	0.000	0	5.376	33.996	26.859	120.2	0.000
10	5.453	34.007	26.856	120.2	0.012	10	5.376	33.996	26.859	120.2	0.012
20	5.451	34.007	26.856	120.2	0.024	20	5.376	33.996	26.859	120.2	0.024
30	5.451	34.007	26.856	120.2	0.036	30	5.380	33.997	26.859	120.1	0.036
40	5.452	34.007	26.858	120.2	0.048	40	5.386	33.997	26.858	120.2	0.048
50	5.452	34.006	26.857	120.3	0.060	50	5.403	34.000	26.859	120.2	0.060
75	5.450	34.006	26.856	120.2	0.091	75	5.405	33.999	26.858	120.2	0.090
100	5.222	34.007	26.885	117.6	0.120	100	5.381	34.035	26.889	117.3	0.120
125	4.678	34.147	27.058	101.2	0.148	125	4.654	34.096	27.021	104.8	0.148
150	4.254	34.116	27.080	99.2	0.174	150	4.349	34.125	27.077	99.5	0.174
175	4.030	34.101	27.091	98.1	0.199	175	4.155	34.116	27.090	98.2	0.199
200	3.869	34.125	27.127	94.7	0.223	200	3.999	34.116	27.106	96.7	0.224
225	3.612	34.158	27.163	91.3	0.297	225	3.849	34.150	27.153	94.2	0.249
250	3.586	34.157	27.180	89.6	0.270	250	3.606	34.139	27.164	91.2	0.272
275	3.437	34.157	27.195	88.3	0.293	275	3.475	34.154	27.189	88.9	0.295
300	3.315	34.157	27.206	87.2	0.315	300	3.398	34.158	27.199	87.9	0.318
350	3.126	34.159	27.226	85.4	0.359	350	3.161	34.159	27.222	85.7	0.362
400	2.811	34.152	27.248	83.2	0.403	400	2.803	34.153	27.250	83.1	0.406
450	2.689	34.168	27.272	81.0	0.445	450	2.649	34.167	27.274	80.7	0.448
500	2.592	34.198	27.304	77.9	0.486	500	2.525	34.185	27.299	78.4	0.489
550	2.600	34.240	27.337	74.8	0.526	550	2.595	34.229	27.328	75.6	0.529
600	2.597	34.267	27.358	72.8	0.564	600	2.600	34.268	27.359	72.7	0.568
622	2.609	34.285	27.372	71.5	0.581	650	2.600	34.311	27.393	69.5	0.605
						700	2.603	34.349	27.423	66.6	0.641
						750	2.602	34.383	27.451	64.0	0.675
						800	2.612	34.422	27.481	61.2	0.709
						850	2.601	34.452	27.506	58.8	0.741
						900	2.548	34.478	27.531	56.4	0.773
						950	2.547	34.510	27.557	54.0	0.803
						1000	2.535	34.543	27.584	51.4	0.832
						1100	2.529	34.584	27.617	48.2	0.868
						1200	2.507	34.624	27.651	45.0	0.941
						1300	2.494	34.656	27.678	42.5	0.992
						1400	2.471	34.690	27.707	39.7	1.041
						1500	2.432	34.717	27.727	37.8	1.088
						1600	2.411	34.750	27.744	36.2	1.134
						1700	2.388	34.749	27.761	34.6	1.178
						1800	2.366	34.762	27.773	33.5	1.222
						1900	2.290	34.770	27.786	32.3	1.265
						2000	2.232	34.775	27.795	31.4	1.307
						2100	2.102	34.769	27.800	30.9	1.349
						2200	1.999	34.766	27.806	30.3	1.389
						2300	1.923	34.766	27.812	29.8	1.429
						2400	1.745	34.757	27.819	2	

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DUMINANT WAVES
49 10.2S	16 04.1W	12/ 4/78	2149 0125	GMT	4079M	250	16KTT		
4 S									
0 4.33	33.887	7.61	1.46	6. 0.23	20.8	117.2	0	4.33	33.887
36 4.20	33.881	7.60	1.49	6. 0.23	21.1	116.3	10	4.29	33.887
72 4.08	33.874	7.55	1.52	7. 0.24	21.4	115.7	20	4.26	33.885
103 3.14	33.872	7.58	1.65	13. 0.26	22.9	107.1	30	4.22	33.883
123 3.16	33.958	7.47	1.69	15. 0.26	24.4	100.8	50	4.15	33.880
144 2.72	33.990	7.38	1.80	16. 0.05	26.3	94.7	75	3.98	33.871
165 2.65	34.029	7.24	1.84	17. 0.02	26.9	91.2	100	3.22	33.869
185 2.64	34.062	6.98	1.90	18. 0.01	27.8	88.6	125	3.12	33.864
206 2.47	34.070	6.85	1.95	20. 0.00	28.5	86.6	150	2.70	34.005
246 2.21	34.116	6.51	2.03	26. 0.00	30.3	81.1	200	2.53	34.069
267 2.09	34.138	6.30	2.12	30. 0.01	31.4	78.6	250	2.19	34.120
328 2.05	34.166	6.10	2.18	34. 0.01	32.1	76.2	300	2.07	34.146
367 2.056	34.210	5.71	2.25	40. 0.00	35.2	72.9	400	2.19	34.268
407 2.222	34.279	5.25	2.32	47. 0.01	34.4	68.9	500	2.81	34.366
468 2.265	34.333	4.95	2.39	54. 0.00	35.4	65.1	600	2.65	34.444
533 2.358	34.397	4.54	2.43	61. 0.00	36.0	61.0	700	2.39	34.516
610 2.389	34.450	4.36	2.44	66. 0.01	36.3	57.2	800	2.42	34.565
682A 2.39	34.505	4.18	2.37	72. 0.00	35.5	53.1	1000	2.46	34.644
811 2.422	34.571	4.10	2.42	75. 0.00	35.8	48.4	1200	2.50	34.693
937A 2.49	34.630	4.13	2.29	75. 0.00	34.0	44.4	1500	2.19	34.748
1064A 2.41	34.653	4.13	2.24	78. 0.00	33.5	42.1	1750	1.98	34.757
1217A 2.29	34.697	4.26	2.22	81. 0.00	32.8	37.8	2000	1.70	34.750
1371A 2.24	34.731	4.40	2.16	81. 0.00	31.9	34.8	2250	1.40	34.734
1522A 2.18	34.749	4.52	2.08	82. 0.00	31.1	33.0	2500	1.19	34.720
1675A 2.02	34.751	4.57	2.09	86. 0.00	31.2	31.6	2750	0.87	34.707
1826A 1.93	34.763	4.67	2.11	87. 0.00	30.6	30.0	3000	0.66	34.698
1979A 1.73	34.751	4.65	2.15	94. 0.00	31.2	29.5	3250	0.49	34.688
2132A 1.53	34.741	4.67	2.19	101. 0.00	31.8	28.6	3500	0.33	34.684
2264A 1.364	34.732	4.68	2.20	107. 0.01	32.2	28.4	3750	0.24	34.677
2373A 1.216	34.723	4.70	2.21	111. 0.02	32.3	28.1	4000	0.15	34.675
2390A 1.027	34.715	4.75	2.26	115. 0.01	32.7	27.5			38 D
2743A 0.88	34.707	4.81	2.29	119. 0.00	32.6	27.2			
2695A 0.722	34.698	4.86	2.30	121. 0.00	33.1	26.9			LATITUDE
3047A 0.633	34.698	4.92	2.30	123. 0.00	33.3	26.4			LONGITUDE
3200A 0.533	34.689	4.95	2.32	124. 0.00	33.4	26.3			MO/DAY/YR
3552A 0.413	34.683	5.09	2.33	125. 0.01	35.7	25.9			START TIME
3505A 0.327	34.683	5.09	2.33	128. 0.02	32.2	28.4			2005 GMT
3683A 0.269	34.678	5.13	2.30	128. 0.00	33.4	25.9			Z
3860A 0.200	34.674	5.20	2.31	129. 0.00	33.6	25.9			T
4064A 0.121	34.675	5.27	2.30	132. 0.01	33.7	25.4			S
36 S									
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME						
49 10.3S	16 42.8W	12/05/78	0047 GMT						
0 4.346	33.882	26.884	117.7	0.000	175	2.476	34.027	27.177	89.9
10 4.362	33.881	26.882	117.9	0.012	200	2.343	34.065	27.217	86.2
20 4.316	33.881	26.887	117.5	0.024	225	2.258	34.109	27.261	82.0
30 4.203	33.876	26.895	116.7	0.035	250	2.084	34.115	27.279	80.3
40 4.199	33.879	26.898	116.5	0.047	275	2.061	34.139	27.300	78.3
50 4.195	33.876	26.896	116.6	0.059	300	1.967	34.151	27.317	76.7
75 3.906	33.870	26.921	114.3	0.088	350	2.064	34.214	27.360	72.6
100 3.328	33.946	27.037	103.2	0.115	400	2.188	34.267	27.392	69.5
125 2.505	33.948	27.112	96.1	0.140	450	2.196	34.304	27.421	66.8
150 2.404	33.986	27.151	92.5	0.164	500	2.298	34.358	27.456	63.5
175 2.539	34.046	27.187	89.0	0.187	550	2.386	34.407	27.488	60.5
200 2.331	34.074	27.227	85.2	0.209	600	2.387	34.439	27.513	58.1
225 2.198	34.097	27.256	82.5	0.230	650	2.410	34.471	27.537	55.8
250 2.143	34.122	27.280	80.2	0.251	700	2.384	34.500	27.562	53.4
275 2.055	34.137	27.299	78.4	0.271	750	2.370	34.529	27.587	51.1
300 2.104	34.159	27.313	77.1	0.290	800	2.427	34.562	27.608	49.1
350 2.028	34.198	27.350	73.6	0.329	850	2.373	34.582	27.629	47.1
400 2.187	34.273	27.397	69.1	0.365	900	2.434	34.604	27.641	46.0
450 2.276	34.327	27.433	65.7	0.400	950	2.489	34.626	27.654	44.7
500 2.347	34.379	27.469	62.3	0.433	1000	2.418	34.633	27.666	43.6
550 2.389	34.416	27.495	59.8	0.465	1100	2.359	34.660	27.689	41.4
600 2.399	34.445	27.517	57.7	0.496	1200	2.320	34.688	27.718	38.7
650 2.386	34.487	27.552	54.4	0.526	1300	2.224	34.706	27.740	36.6
700 2.407	34.509	27.568	52.9	0.554	1400	2.239	34.730	27.758	34.9
750 2.384	34.537	27.592	50.6	0.582	1500	2.176	34.740	27.771	33.6
800 2.420	34.567	27.613	48.6	0.609	1600	2.078	34.742	27.781	32.7
820 2.436	34.580	27.622	47.8	0.620	1700	2.106	34.766	27.798	31.1
					1800	1.912	34.755	27.803	30.7
					1900	1.857	34.757	27.810	29.9
					2000	1.707	34.747	27.814	29.6
					2100	1.596	34.742	27.815	29.2
					2200	1.464	34.734	27.821	28.9
					2300	1.338	34.726	27.824	28.7
					2400	1.241	34.722	27.827	28.3
					2500	1.119	34.717	27.832	27.9
					2600	1.022	34.712	27.834	27.7
					2700	0.920	34.707	27.837	27.4
					2800	0.829	34.703	27.839	27.2
					2900	0.723	34.697	27.841	27.0
					3000	0.662	34.696	27.844	26.7
					3100	0.601	34.692	27.845	26.7
					3200	0.533	34.689	27.846	26.5
					3300	0.450	34.686	27.849	26.3
					3400	0.363	34.682	27.849	26.2
					3500	0.334	34.681	27.851	26.0
					3600	0.303	34.680	27.852	26.0
					3700	0.250	34.677	27.853	25.9
					3800	0.220	34.676	27.854	25.8
					3900	0.167	34.673	27.854	25.8
					4000	0.123	34.671	27.855	25.7
					4074	0.117	34.672	27.856	25.6

RV MELVILLE

INUOMED LIG XIII

LATITUDE 49 47.4S	LONGITUDE 16 04.0W	MO/DAY/YR 12/ 5/78	MESSENGER 1421 1928	TIME GMT	BOTTOM 4263M	WIND 270 21KT	SPEED 5	WEATHER	DOMINANT WAVES						
									Z	T	S	O2	SIGT	UT	DD
1	3.70	33.868	7.64	1.54	8.	0.23	21.8	112.5	0	3.70	33.868	7.64	26.940	112.5	0.000
11	3.69	33.867	7.71	1.55	8.	0.24	22.2	112.5	10	3.69	33.868	7.70	26.940	112.5	0.011
52	3.63	33.870	7.68	1.57	8.	0.23	22.1	111.7	20	3.68	33.868	7.70	26.940	112.4	0.023
82	3.58	33.883	7.61	1.58	9.	0.23	22.3	110.2	30	3.66	33.868	7.70	26.942	112.3	0.034
118	2.91	33.987	7.41	1.78	14.	0.14	25.9	96.5	50	3.63	33.871	7.63	26.947	111.8	0.056
144	2.77	34.014	7.29	1.83	15.	0.01	26.6	93.3	75	3.59	33.881	7.63	26.960	110.6	0.084
185	2.58	34.078	6.89	1.93	19.	0.01	28.2	86.9	100	3.25	33.934	7.52	27.034	103.5	0.111
216	2.38	34.095	6.71	2.02	22.	0.00	29.3	84.0	125	2.86	33.997	7.38	27.120	95.4	0.136
267	2.04	34.125	6.47	2.17	28.	0.00	30.7	79.2	150	2.74	34.025	7.23	27.152	92.3	0.160
328	1.95	34.164	6.08	2.22	34.	0.00	32.1	75.6	200	2.49	34.089	6.79	27.225	85.4	0.205
368	2.06	34.219	5.61	2.29	40.	0.00	33.6	72.2	250	2.14	34.116	6.55	27.275	80.7	0.247
419	2.12	34.265	5.28	2.35	46.	0.00	34.4	69.2	300	1.99	34.148	6.29	27.312	77.2	0.287
479	2.29	34.337	4.81	2.43	54.	0.00	35.4	65.0	400	2.10	34.250	5.39	27.385	70.3	0.362
480A	2.27	34.331	4.82	2.37	53.	0.00	34.0	65.3	500	2.29	34.351	4.74	27.451	64.0	0.431
541	2.32	34.389	4.37	2.47	59.	0.00	35.0	61.3	600	2.35	34.428	4.38	27.510	58.4	0.495
631A	2.33	34.446	4.29	2.46	66.	0.00	35.4	57.1	700	2.28	34.483	4.14	27.557	53.9	0.555
762A	2.23	34.524	4.03	2.38	74.	0.01	35.1	50.4	800	2.23	34.535	4.03	27.602	49.6	0.610
934A	2.286	34.609	4.05	2.42	79.	0.00	34.1	44.4	1000	2.27	34.638	4.08	27.681	42.2	0.711
1005A	2.259	34.667	4.12	2.34	81.	0.00	33.2	39.8	1200	2.20	34.691	4.19	27.729	37.6	0.803
1237A	2.180	34.695	4.21	2.22	84.	0.00	32.6	37.1	1500	2.05	34.739	4.43	27.780	32.8	0.928
1389A	2.097	34.720	4.32	2.24	86.	0.01	31.9	34.5	1750	1.95	34.756	4.63	27.802	30.7	1.027
1540A	2.041	34.744	4.47	2.17	86.	0.00	31.2	32.3	2000	1.68	34.747	4.61	27.815	29.4	1.121
1692A	1.991	34.755	4.57	2.12	85.	0.01	30.6	31.1	2250	1.87	34.750	4.63	27.824	28.6	1.212
1695A	1.818	34.756	4.67	2.14	91.	0.00	30.5	29.7	2500	1.10	34.717	4.72	27.832	27.9	1.298
2097A	1.545	34.758	4.61	2.17	100.	0.00	31.3	29.2	2750	0.87	34.704	4.80	27.837	27.4	1.380
2301A	1.514	34.727	4.64	2.18	107.	0.00	31.6	28.4	3000	0.66	34.696	4.88	27.842	26.9	1.459
2504A	1.099	34.716	4.72	2.26	114.	0.01	32.3	27.9	3250	0.48	34.685	4.99	27.846	26.6	1.533
2707A	0.908	34.706	4.79	2.29	118.	0.01	32.6	27.4	3500	0.33	34.678	5.06	27.849	26.3	1.603
2911A	0.736	34.696	4.84	2.27	121.	0.02	32.8	27.2	3750	0.23	34.680	5.13	27.856	25.6	1.670
3113A	0.565	34.690	4.93	2.32	124.	0.02	35.0	26.6	4000	0.10	34.671	5.26	27.856	25.5	1.734
3317A	0.438	34.682	5.02	2.33	126.	0.02	35.3	26.5	4250	0.03	34.661	5.29	27.852	26.0	1.795
3521A	0.319	34.677	5.06	2.32	128.	0.02	35.5	26.3							
3726B	0.241	34.680	5.12	2.33	129.	0.00	35.0	25.6							
3930B	0.153	34.671	5.23	2.33	132.	0.00	35.1	25.8							
4135B	0.051	34.671	5.30	2.38	134.	0.00	35.2	25.3							
4235B	0.029	34.662	5.29	2.37	134.	0.01	35.1	25.9							

39 D LATITUDE LONGITUDE MO/DAY/YR START TIME
49 48.9S 18 54.3W 12/05/78 1250 GMT

LATITUDE 49 47.4S	LONGITUDE 18 54.0W	MO/DAY/YR 12/05/78	START TIME 1856 GMT	Z	T	S	SIGMA T	DT	DD
0	3.701	33.867	26.939	112.6	0.000	0	3.712	33.859	26.931
10	3.701	33.866	26.938	112.7	0.011	10	3.657	33.865	26.941
20	3.693	33.867	26.939	112.5	0.023	20	3.627	33.863	26.943
30	3.692	33.867	26.940	112.5	0.034	30	3.620	33.865	26.945
40	3.697	33.867	26.939	112.5	0.045	40	3.609	33.864	26.945
50	3.698	33.867	26.939	112.5	0.056	50	3.589	33.868	26.950
75	3.639	33.868	26.945	111.9	0.085	75	3.579	33.870	26.953
100	3.735	34.010	27.049	102.1	0.111	100	3.540	33.878	26.963
125	2.998	34.006	27.115	95.8	0.136	125	3.054	33.974	27.085
150	2.830	34.027	27.147	92.8	0.160	150	2.295	33.965	27.143
175	2.381	34.039	27.195	88.3	0.183	175	2.161	34.009	27.189
200	2.464	34.086	27.227	85.2	0.203	200	2.236	34.063	27.226
225	2.255	34.101	27.255	82.6	0.226	225	2.188	34.094	27.254
250	2.117	34.117	27.278	80.4	0.247	250	2.034	34.106	27.276
275	2.022	34.133	27.298	78.4	0.267	275	2.006	34.131	27.298
300	1.939	34.145	27.315	76.9	0.287	300	2.009	34.161	27.322
350	2.063	34.205	27.353	73.3	0.325	350	2.018	34.205	27.356
400	2.098	34.256	27.391	69.7	0.361	400	2.106	34.253	27.388
450	2.231	34.313	27.426	66.4	0.396	450	2.256	34.303	27.417
500	2.314	34.359	27.456	65.5	0.430	500	2.301	34.353	27.444
545	2.320	34.394	27.483	60.9	0.459	550	2.278	34.538	27.602
						550	2.298	34.570	27.625
						590	2.306	34.592	27.642
						650	2.301	34.613	27.659
						650	2.278	34.667	27.704
						1000	2.278	34.667	27.704
						1200	2.251	34.688	27.723
						1300	2.236	34.712	27.744
						1400	2.175	34.729	27.762
						1500	2.121	34.736	27.772
						1600	2.078	34.746	27.784
						1700	2.007	34.752	27.794
						1800	1.927	34.752	27.801
						1900	1.844	34.753	27.808
						2000	1.748	34.750	27.813
						2100	1.587	34.739	27.816
						2200	1.464	34.732	27.819
						2300	1.335	34.724	27.822
						2400	1.209	34.719	27.827
						2500	1.117	34.714	27.829
						2600	1.021	34.707	27.830
						2700	0.923	34.704	27.834
						2800	0.810	34.699	27.837
						2900	0.751	34.695	27.838
						3000	0.657	34.692	27.841
						3100	0.570	34.688	27.843
						3200	0.512	34.686	27.845
						3300	0.445	34.683	27.847
						3400	0.384	34.681	27.849
						3500	0.332	34.679	27.850
						3600	0.276	34.678	27.852
						3700	0.232	34.675	27.852
						3800	0.180	34.674	27.854
						3900	0.144	34.670	27.853
						4000	0.101	34.669	27.855
						4100	0.069	34.668	27.855

RV MELVILLE

INBOUND LEG XIII

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LATITUDE	LONGITUDE	MO/DAY/YR	MESSNGER	TIME	BOTTUM	WIND	SPEED	WEATHER	DOMINANT WAVES						
50 35.7S	21 03.5W	12/ 6/78	1113 1505	GMT	4509M	290	28KT	2	290 6 6						
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	UT	DD
0	3.29	33.854	7.75	1.51	8.	0.28	21.7	109.8	0	3.29	33.854	7.75	26.968	109.8	0.000
51	3.24	33.853	7.77	1.53	8.	0.28	21.9	109.5	10	3.28	33.855	7.75	26.968	109.7	0.011
76	3.21	33.861	7.74	1.53	7.	0.27	21.7	108.6	20	3.27	33.855	7.76	26.969	109.7	0.022
102	3.14	33.859	7.77	1.53	8.	0.28	21.9	108.1	30	3.26	33.855	7.76	26.970	109.6	0.033
127	2.12	33.913	7.66	1.75	17.	0.16	25.9	95.8	50	3.24	33.854	7.77	26.971	109.5	0.055
148	2.04	33.948	7.55	1.84	18.	0.07	26.8	92.6	75	3.21	33.862	7.74	26.980	108.6	0.082
173	2.01	34.011	7.19	1.90	21.	0.02	27.9	87.6	100	3.15	33.860	7.77	26.985	108.2	0.110
210	1.99	34.083	6.75	2.02	26.	0.02	29.7	82.0	125	2.20	33.909	7.67	27.104	96.9	0.135
235	1.82	34.136	6.37	2.13	32.	0.02	31.2	76.7	150	2.04	33.954	7.52	27.153	92.2	0.159
311	1.76	34.187	5.89	2.21	40.	0.01	32.8	72.5	200	2.00	34.067	6.86	27.247	83.3	0.203
367	2.08	34.272	5.26	2.36	48.	0.00	34.2	68.3	250	1.64	34.132	6.41	27.311	77.2	0.244
418	2.35	34.340	4.83	2.41	54.	0.00	35.2	65.1	300	1.77	34.179	5.99	27.354	73.2	0.282
480	2.315	34.374	4.66	2.44	59.	0.01	35.5	62.4	400	2.26	34.320	4.96	27.428	66.2	0.353
552	2.393	34.439	4.37	2.46	65.	0.01	35.6	58.1	500	2.04	34.392	4.58	27.479	61.3	0.419
633	2.396	34.508	4.14	2.47	71.	0.01	35.6	52.9	600	2.89	34.482	4.21	27.547	54.9	0.480
714	2.393	34.551	4.12	2.44	74.	0.00	35.3	49.6	700	2.69	34.545	4.12	27.597	50.1	0.536
805A	2.38	34.589	4.05	2.35	76.	0.00	34.9	46.7	800	2.58	34.588	4.05	27.632	46.8	0.589
916	2.299	34.626	4.11	2.34	80.	0.00	34.6	43.2	1000	2.00	34.654	4.14	27.691	41.2	0.686
1009A	2.30	34.656	4.14	2.22	80.	0.00	33.9	41.0	1200	2.29	34.711	4.22	27.738	36.6	0.776
1163A	2.31	34.702	4.17	2.16	80.	0.00	32.7	37.6	1500	2.12	34.747	4.53	27.781	32.7	0.901
1316A	2.21	34.731	4.40	2.15	81.	0.00	31.8	34.6	1750	1.93	34.758	4.63	27.806	30.3	0.999
1470A	2.14	34.744	4.52	2.10	83.	0.00	31.4	33.1	2000	1.67	34.767	4.64	27.816	29.3	1.038
1624A	2.03	34.754	4.56	2.07	86.	0.01	31.1	31.5	2250	1.07	34.729	4.65	27.824	28.7	1.183
1777A	1.91	34.760	4.64	2.09	88.	0.00	30.9	30.1	2500	1.16	34.721	4.70	27.831	27.9	1.270
1931A	1.75	34.752	4.65	2.08	94.	0.00	31.1	29.6	2750	0.92	34.711	4.80	27.840	27.1	1.353
2085A	1.56	34.740	4.62	2.10	101.	0.00	31.9	29.1	3000	0.71	34.697	4.92	27.841	27.0	1.432
2238A	1.38	34.729	4.65	2.14	107.	0.01	32.4	28.7	3250	0.54	34.691	4.97	27.847	26.4	1.500
2392A	1.254	34.725	4.70	2.17	110.	0.00	32.6	28.2	3500	0.40	34.683	5.09	27.849	26.3	1.580
2545A	1.119	34.718	4.70	2.20	113.	0.00	32.6	27.8	3750	0.27	34.676	5.15	27.851	26.1	1.688
2747A	0.921	34.711	4.80	2.24	117.	0.01	33.1	27.1							
2949A	0.751	34.698	4.91	2.26	121.	0.00	33.4	27.1							
3150A	0.603	34.692	4.93	2.23	123.	0.01	33.6	26.7							
3550A	0.481	34.690	5.02	2.29	124.	0.00	33.6	26.2							
5550A	0.372	34.680	5.11	2.30	127.	0.00	33.8	26.3							
5750A	0.272	34.676	5.15	2.32	129.	0.00	33.9	26.1							

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME
50 35.7S	21 17.3W	12/06/78	1440 GMT	50 35.9S	21 14.4W	12/06/78	0938 GMT
Z	T	S	SIGMA T	DT	DD		

0	3.280	33.860	26.973	109.3	0.000	0	3.296	33.854	26.967	109.9	0.000
10	3.282	33.855	26.969	109.7	0.011	10	3.273	33.853	26.968	109.7	0.011
20	3.274	33.856	26.971	109.5	0.022	20	3.269	33.853	26.969	109.7	0.022
30	3.271	33.855	26.970	109.6	0.033	30	3.270	33.853	26.969	109.7	0.033
40	3.274	33.855	26.970	109.6	0.044	40	3.270	33.853	26.969	109.7	0.044
50	3.279	33.855	26.969	109.6	0.055	50	3.266	33.853	26.969	109.7	0.055
75	3.236	33.855	26.973	109.3	0.082	75	3.190	33.852	26.975	109.1	0.082
100	3.181	33.854	26.978	108.9	0.110	100	3.070	33.852	26.986	108.1	0.110
125	2.679	33.878	27.041	102.8	0.136	125	1.996	33.915	27.126	94.8	0.155
150	2.032	33.940	27.144	93.1	0.161	150	1.962	33.974	27.176	90.1	0.158
175	1.944	33.990	27.190	86.7	0.184	175	1.926	34.030	27.224	85.5	0.180
200	1.969	34.058	27.243	83.7	0.206	200	2.091	34.090	27.259	82.2	0.202
225	1.937	34.112	27.288	79.4	0.226	225	2.013	34.120	27.289	79.4	0.222
250	1.894	34.142	27.316	76.8	0.246	250	1.999	34.141	27.307	77.7	0.242
275	1.859	34.172	27.342	74.3	0.265	275	1.917	34.158	27.327	75.8	0.261
300	1.767	34.193	27.366	72.1	0.284	300	2.024	34.178	27.342	74.3	0.280
350	2.014	34.265	27.405	68.4	0.319	350	2.445	34.518	27.572	52.5	0.506
400	2.317	34.337	27.438	65.2	0.354	400	2.425	34.536	27.588	51.0	0.534
450	2.307	34.373	27.467	62.4	0.387	450	2.397	34.560	27.609	49.0	0.561
500	2.286	34.401	27.491	60.1	0.418	500	2.400	34.586	27.630	47.0	0.587
550	2.379	34.446	27.520	57.5	0.449	550	2.374	34.609	27.650	45.1	0.612
600	2.380	34.491	27.556	54.1	0.479	600	2.297	34.616	27.662	44.0	0.637
650	2.360	34.517	27.578	52.0	0.507	650	2.291	34.653	27.676	42.6	0.661
700	2.361	34.541	27.597	50.1	0.534	700	2.305	34.654	27.692	41.2	0.684
750	2.400	34.579	27.624	47.6	0.561	750	2.300	34.682	27.715	39.0	0.730
800	2.384	34.595	27.638	46.2	0.586	800	2.257	34.701	27.733	37.2	0.774
850	2.371	34.608	27.650	45.2	0.611	850	2.257	34.725	27.753	35.4	0.817
900	2.297	34.623	27.668	43.4	0.636	900	2.164	34.735	27.768	33.9	0.859
926	2.287	34.632	27.676	42.7	0.648	926	2.125	34.745	27.779	32.9	0.899
				1000	2.034	34.753	27.793	31.6	0.939		
				1700	1.961	34.757	27.802	30.7	0.978		
				1800	1.893	34.756	27.806	30.3	1.016		
				1900	1.786	34.752	27.812	29.8	1.054		
				2000	1.686	34.749	27.817	29.3	1.091		
				2100	1.530	34.735	27.817	29.3	1.128		
				2200	1.410	34.728	27.820	29.0	1.164		
				2300	1.299	34.723	27.824	28.6	1.200		
				2400	1.227	34.723	27.829	28.2	1.255		
				2500	1.134	34.718	27.831	27.9	1.269		
				2600	1.037	34.713	27.834	27.7	1.303		

RV MELVILLE											INDOURED LEG XIII									
LATITUDE 51 20.8S	LONGITUDE 25 01.0W	MU/DAY/YR 12/7/78	MESSNGER 0507 0841	TIME GMT	BOTTUM 4837M	WIND USU	SPEED 11KT	WEATHER 4	DOMINANT WAVES			320			5					
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD					
1	3.09	33.824	7.84	1.51	10.	0.26	21.5	110.3	0	3.09	33.824	7.84	26.962	110.3	0.000					
26	2.96	33.833	7.75	1.53	8.	0.23	21.6	106.6	10	3.05	33.828	7.80	26.968	109.8	0.011					
52	2.76	33.846	7.74	1.57	9.	0.26	22.0	105.9	20	3.00	33.832	7.76	26.976	109.0	0.022					
77	2.60	33.848	7.78	1.61	10.	0.26	22.5	104.5	30	2.93	33.837	7.75	26.985	108.1	0.033					
103	2.51	33.850	7.70	1.63	12.	0.27	22.7	103.6	50	2.78	33.847	7.74	27.007	106.1	0.054					
133	2.15	33.864	7.71	1.69	14.	0.26	24.0	99.8	75	2.61	33.849	7.78	27.023	104.5	0.081					
164	1.35	33.891	7.63	1.90	24.	0.11	27.6	91.4	100	2.52	33.851	7.71	27.032	103.7	0.107					
194	1.24	33.894	7.46	1.96	25.	0.09	26.5	67.4	125	2.26	33.860	7.71	27.059	101.1	0.133					
225	1.33	34.014	7.12	2.03	29.	0.05	29.5	82.7	150	1.70	33.883	7.68	27.122	95.2	0.157					
266	1.49	34.101	6.47	2.14	53.	0.01	31.3	77.1	200	1.25	33.958	7.41	27.213	86.3	0.203					
318	1.59	34.160	6.04	2.22	58.	0.00	32.5	73.3	250	1.43	34.071	6.72	27.292	79.1	0.245					
379	1.82	34.264	5.26	2.35	49.	0.00	34.6	67.0	300	1.36	34.143	6.18	27.340	74.3	0.283					
419	1.86	34.304	5.05	2.40	54.	0.01	35.3	64.3	400	1.84	34.286	5.13	27.434	65.6	0.355					
460	1.57	34.331	5.04	2.43	61.	0.01	35.8	60.2	500	1.64	34.384	4.80	27.528	56.7	0.417					
551	1.87	34.455	4.44	2.46	72.	0.01	36.4	52.9	600	1.93	34.496	4.28	27.596	50.3	0.473					
653	1.95	34.528	4.16	2.48	79.	0.00	36.3	48.0	700	1.98	34.556	4.13	27.639	46.1	0.524					
754	2.01	34.582	4.10	2.44	83.	0.00	35.8	44.3	800	2.05	34.603	4.09	27.671	43.1	0.572					
863A	2.08	34.624	4.07	2.42	84.	0.01	34.7	41.7	1000	1.99	34.660	4.13	27.721	38.4	0.662					
1015A	1.98	34.662	4.14	2.35	89.	0.00	34.4	36.1	1200	1.96	34.704	4.22	27.759	34.8	0.745					
1166A	1.98	34.696	4.16	2.26	91.	0.00	33.3	35.5	1500	1.89	34.740	4.52	27.797	31.1	0.862					
1517A	1.89	34.723	4.44	2.23	92.	0.00	32.7	32.8	1750	1.64	34.745	4.64	27.817	29.2	0.954					
1467A	1.85	34.737	4.50	2.18	92.	0.00	31.8	31.4	2000	1.32	34.730	4.67	27.828	26.2	1.041					
1668A	1.732	34.747	4.62	2.14	93.	0.00	31.4	29.8	2250	1.09	34.718	4.75	27.834	27.7	1.125					
1667A	1.482	34.740	4.65	2.18	102.	0.01	31.9	26.6	2500	0.92	34.714	4.81	27.842	26.9	1.205					
2068A	1.238	34.725	4.69	2.20	109.	0.01	32.6	28.1	2750	0.75	34.700	4.88	27.842	27.0	1.283					
2268A	1.078	34.717	4.76	2.22	113.	0.01	32.7	27.7	3000	0.56	34.693	4.95	27.847	26.5	1.359					
2467A	0.938	34.716	4.80	2.24	117.	0.01	33.1	26.9	3250	0.45	34.686	5.01	27.848	26.3	1.431					
2668A	0.817	34.703	4.86	2.25	120.	0.01	33.2	27.1	3500	0.29	34.680	5.10	27.852	26.0	1.500					
2867A	0.651	34.695	4.90	2.27	122.	0.01	33.3	26.8	3750	0.16	34.674	5.21	27.855	25.7	1.566					
3066A	0.525	34.691	4.97	2.31	125.	0.01	33.5	26.3	4000	0.09	34.670	5.25	27.855	25.7	1.628					
3265A	0.443	34.685	5.01	2.32	126.	0.01	33.7	26.3	4250	0.05	34.669	5.31	27.856	25.6	1.689					
3463A	0.323	34.680	5.08	2.30	129.	0.01	33.8	26.1	4500	0.03	34.665	5.34	27.854	25.8	1.749					
3661A	0.196	34.676	5.18	2.32	131.	0.01	33.8	25.7	4750	-0.01	34.662	5.36	27.855	25.7	1.809					
3860A	0.125	34.671	5.24	2.32	133.	0.00	33.8	25.7												
4058A	0.080	34.668	5.26	2.32	135.	0.00	33.8	25.7												
4256A	0.049	34.668	5.31	2.30	135.	0.02	33.7	25.6												
4453A	0.025	34.664	5.33	2.30	135.	0.00	33.7	25.7												
4601A	0.004	34.664	5.35	2.32	135.	0.00	33.7	25.8												
4750A	-0.007	34.662	5.36	2.28	132.	0.00	33.7	25.7												

41 S						INDOMED LEG XIII CTD						41 N					
LATITUDE	LONGITUDE	MJD/DAY/YR	START TIME	0804 GMT	DD	LATITUDE	LONGITUDE	MJD/DAY/YR	START TIME	0317 GMT	DD						
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD						
0	3.090	33.826	26.964	110.2	0.000	0	2.857	33.845	27.000	106.8	0.000						
10	3.083	33.829	26.967	109.9	0.011	10	2.847	33.848	27.003	106.5	0.011						
20	3.032	33.832	26.974	109.2	0.022	20	2.836	33.848	27.004	106.4	0.021						
30	2.949	33.844	26.991	107.6	0.033	30	2.813	33.849	27.007	106.1	0.032						
40	2.864	33.847	27.001	106.7	0.044	40	2.756	33.851	27.013	105.5	0.043						
50	2.782	33.849	27.009	105.9	0.054	50	2.725	33.852	27.017	105.2	0.053						
75	2.681	33.852	27.021	104.8	0.081	75	2.715	33.853	27.018	105.0	0.079						
100	2.560	33.854	27.032	103.7	0.107	100	2.704	33.854	27.020	104.8	0.106						
125	2.481	33.856	27.041	102.9	0.153	125	2.630	33.855	27.027	104.2	0.152						
150	1.992	33.874	27.094	97.6	0.198	150	2.490	33.859	27.042	102.6	0.198						
175	1.408	33.904	27.160	91.5	0.182	175	1.808	33.894	27.124	95.0	0.183						
200	1.288	33.932	27.191	88.6	0.204	200	1.257	33.957	27.213	86.5	0.206						
225	1.241	33.984	27.236	84.4	0.226	225	1.359	34.029	27.264	81.7	0.227						
250	1.453	34.061	27.283	79.9	0.247	250	1.452	34.060	27.284	79.9	0.247						
275	1.520	34.115	27.321	76.3	0.266	275	1.553	34.112	27.317	76.7	0.267						
300	1.579	34.152	27.347	73.9	0.285	300	1.582	34.156	27.350	73.6	0.286						
350	1.725	34.234	27.402	68.7	0.322	350	1.710	34.221	27.393	69.5	0.322						
400	1.788	34.295	27.446	64.5	0.356	400	1.966	34.308	27.443	64.8	0.357						
450	1.590	34.342	27.498	59.5	0.387	450	2.073	34.372	27.485	60.7	0.389						
500	1.727	34.401	27.535	56.0	0.417	500	2.016	34.407	27.518	57.6	0.419						
550	1.871	34.464	27.575	52.2	0.445	550	1.955	34.440	27.549	54.7	0.449						
600	1.904	34.495	27.597	50.2	0.472	600	2.042	34.492	27.584	51.4	0.476						
650	1.945	34.534	27.625	47.5	0.498	650	2.068	34.518	27.603	49.6	0.503						
700	1.986	34.553	27.637	46.4	0.523	700	2.082	34.550	27.627	47.3	0.529						
750	2.008	34.578	27.655	44.6	0.547	750	2.084	34.577	27.648	45.3	0.554						
800	2.030	34.606	27.676	42.7	0.571	800	2.064	34.597	27.666	43.6	0.578						
850	1.999	34.620	27.689	41.4	0.593	850	2.043	34.611	27.679	42.4	0.601						
900	1.990	34.639	27.705	39.9	0.616	900	2.029	34.640	27.703	40.1	0.624						
950	1.971	34.657	27.721	38.4	0.637	950	2.013	34.655	27.716	38.8	0.646						
						1000	2.000	34.666	27.726	37.9	0.667						
						1100	1.989	34.692	27.748	35.9	0.709						
						1200	1.959	34.704	27.760	34.7	0.750						
						1300	1.933	34.719	27.774	33.4	0.789						
						1400	1.886	34.733	27.789	32.0	0.828						
						1500	1.811	34.740	27.800	30.9	0.866						
						1600	1.705	34.739	27.807	30.2	0.903						
						1700	1.618	34.739	27.814	29.6	0.939						
						1800	1.529	34.734	27.816	29.4	0.974						
						1900	1.435	34.731	27.821	28.9	1.010						
						2000	1.367	34.729	27.824	28.6	1.045						
						2100	1.254	34.723	27.827	28.3	1.079						
						2200	1.204	34.720	27.828	28.2	1.113						
						2300	1.125	34.719	27.833	27.8	1.147						
						2400	1.048	34.715	27.835	27.6	1.180						
						2500	0.960	34.712	27.838	27.3	1.213						
						2600	0.876	34.706	27.839	27.2	1.245						
						2700	0.787	34.703	27.842	26.9	1.276						
						2800	0.698	34.699	27.844	26.7	1.307						
						2900	0.613	34.694	27.846	26.6	1.337						
						3000	0.560	34.691	27.846	26.5	1.366						
						3100	0.485	34.688	27.848	26.3	1.395						
						3200	0.418	34.685	27.850	26.2	1.424						
						3300	0.379	34.684	27.851	26.1	1.452						
						3400	0.315	34.681	27.852	25.9	1.479						
						3500	0.274	34.679	27.853	25.9	1.506						
						3600	0.221	34.677	27.854	25.7	1.532						
						3700	0.198	34.675	27.854	25.8	1.558						
						3800	0.158	34.674	27.856	25.7	1.584						
						3900	0.123	34.672	27.856	25.6	1.609						
						4000	0.088	34.671	27.857	25.5	1.634						
						4100	0.070	34.670	27.857	25.5	1.658						
						4200	0.062	34.669	27.857	25.5	1.682						
						4300	0.058	34.668	27.856	25.6	1.706						
						4400	0.039	34.668	27.857	25.5	1.750						
						4500	0.015	34.665	27.856	25.6	1.754						
						4600	-0.001	34.667	27.858	25.4	1.778						
						4700	-0.019	34.665	27.858	25.5	1.801						
						4764	-0.028	34.665	27.858	25.4	1.816						

MV MELVILLE

INCOMING LEG XIII

Z	T	S	U2	P04	S103	NO2	NU3	DT	MESSNGER		TIME	BOTTOM	MINU	SPEED	WEATHER	DOMINANT WAVES		
									1952	2329	GMT	339UM	18U	16KT	6	S16T	DT	DD
1	2.87	33.831	7.02	1.51	9.	0.26	21.4	108.0	0	2.87	33.831	7.02	26.907	100.0	0.000			
11	2.86	33.830	7.06	1.53	10.	0.27	21.6	107.9	10	2.86	33.832	7.06	26.907	107.9	0.011			
52	2.77	33.846	7.79	1.55	9.	0.25	21.9	106.0	20	2.84	33.834	7.84	26.991	107.6	0.022			
103	2.70	33.847	7.71	1.57	10.	0.27	22.0	105.3	30	2.82	33.838	7.83	26.996	107.1	0.032			
133	1.54	33.910	7.58	1.85	22.	0.12	27.0	92.0	50	2.77	33.846	7.79	27.007	106.1	0.054			
168	1.30	34.001	7.13	2.04	28.	0.04	29.2	83.5	75	2.74	33.848	7.77	27.011	105.7	0.080			
204	1.38	34.001	6.61	2.10	33.	0.03	30.5	77.9	100	2.70	33.848	7.72	27.014	105.4	0.107			
255	1.78	34.217	5.57	2.28	43.	0.02	33.2	70.3	125	1.85	33.890	7.60	27.116	95.7	0.132			
305	1.89	34.265	5.27	2.34	49.	0.01	34.0	67.5	150	1.42	33.964	7.58	27.207	87.2	0.155			
356	1.99	34.336	4.88	2.40	57.	0.00	35.1	62.8	200	1.57	34.074	6.67	27.299	78.4	0.197			
407	2.12	34.410	4.35	2.44	65.	0.00	35.6	58.2	250	1.74	34.206	5.66	27.378	71.0	0.234			
457	2.13	34.453	4.35	2.47	69.	0.00	35.6	55.0	300	1.89	34.263	5.29	27.412	67.7	0.269			
533	2.229	34.510	4.24	2.45	74.	0.01	35.6	51.5	400	2.10	34.402	4.41	27.506	58.8	0.334			
606A	2.20	34.541	4.04	2.32U	76.	0.01	35.7	48.9	500	2.19	34.488	4.30	27.566	52.6	0.392			
660	2.202	34.582	4.04	2.43	80.	0.03	35.3	45.8	600	2.20	34.538	4.05	27.657	49.1	0.446			
708A	2.16	34.591	4.04	2.38	81.	0.00	35.6	44.8	700	2.17	34.591	4.04	27.652	44.9	0.496			
809A	2.20	34.636	4.04	2.36	83.	0.00	34.9	41.7	800	2.19	34.632	4.04	27.653	42.0	0.543			
911A	2.16	34.663	4.08	2.28	85.	0.01	34.4	39.3	1000	2.14	34.689	4.14	27.733	37.2	0.632			
1019A	2.13	34.694	4.16	2.27	85.	0.01	33.8	36.8	1200	2.04	34.724	4.28	27.769	38.9	0.713			
1216A	2.03	34.725	4.29	2.13	88.	0.00	32.6	33.7	1500	1.93	34.754	4.55	27.802	38.7	0.829			
1368A	1.98	34.743	4.68	2.15	88.	0.01	31.9	31.9	1750	1.71	34.752	4.66	27.817	29.3	0.921			
1520A	1.92	34.755	4.56	2.11	88.	0.01	31.3	30.6	2000	1.58	34.786	4.70	27.820	28.3	1.009			
1673A	1.788	34.755	4.71	2.07	90.	0.01	31.2	29.6	2250	1.10	34.718	4.73	27.834	27.7	1.094			
1824A	1.624	34.748	4.61	2.13	96.	0.02	31.3	29.0	2500	0.85	34.707	4.81	27.841	27.0	1.174			
1977A	1.408	34.737	4.70	2.16	103.	0.00	32.4	28.3	2750	0.68	34.697	4.87	27.844	26.8	1.251			
2130A	1.24 K	34.726	4.69	2.20	109.	0.00	32.7	28.0	3000	0.52	34.689	4.98	27.867	26.5	1.325			
2281A	1.065	34.716	4.75	2.24	113.	0.00	32.9	27.7	3250	0.37	34.682	5.08	27.850	26.2	1.396			
2335A	0.895	34.709	4.79	2.27	117.	0.00	33.2	27.1										
2588A	0.794	34.703	4.83	2.27	119.	0.00	33.4	27.0										
2740A	0.682	34.697	4.87	2.27	121.	0.00	33.4	26.5										
2893A	0.587	34.692	4.93	2.27	123.	0.02	33.4	26.6										
3097A	0.487	34.687	5.00	2.27	125.	0.01	33.6	26.4										
3201A	0.406	34.683	5.03	2.29	126.	0.01	33.7	26.3										
3303A	0.326	34.679	5.15	2.11U	126.	0.02	33.8	26.2										

INDOMED LEG XIII CTU											
42 S		INDOMED LEG XIII CTU						42 D			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			
51 46.2S	25 21.1W	12/07/78	2258 GMT		51 46.7S	25 19.4W	12/07/78	1840 GMT			
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	2.854	33.832	26.990	107.7	0.000	0	2.947	33.851	26.981	108.6	0.000
10	2.837	33.835	26.993	107.4	0.011	10	2.916	33.839	26.990	107.7	0.011
20	2.759	33.847	27.010	105.8	0.021	20	2.821	33.848	27.005	106.3	0.022
30	2.736	33.848	27.013	105.6	0.032	30	2.799	33.851	27.010	105.8	0.032
40	2.735	33.848	27.013	105.5	0.043	40	2.789	33.852	27.011	105.7	0.043
50	2.736	33.848	27.013	105.6	0.053	50	2.785	33.852	27.012	105.7	0.053
75	2.734	33.850	27.014	105.4	0.080	75	2.777	33.852	27.012	105.6	0.080
100	2.687	33.850	27.018	105.0	0.106	100	2.667	33.847	27.018	105.1	0.106
125	2.384	33.860	27.052	101.9	0.132	125	2.278	33.865	27.064	100.7	0.132
150	1.370	33.996	27.197	88.1	0.156	150	1.424	33.951	27.197	88.1	0.156
175	1.308	34.018	27.259	82.2	0.177	175	1.386	34.022	27.256	82.4	0.177
200	1.372	34.072	27.297	78.5	0.197	200	1.432	34.081	27.300	78.5	0.197
225	1.521	34.142	27.343	74.2	0.217	225	1.552	34.152	27.349	75.7	0.217
250	1.695	34.199	27.376	71.1	0.235	250	1.683	34.192	27.371	71.5	0.235
275	1.833	34.236	27.395	69.3	0.253	275	1.861	34.243	27.399	68.9	0.253
300	1.953	34.277	27.419	67.0	0.270	300	1.896	34.273	27.420	66.9	0.270
350	2.000	34.337	27.463	62.8	0.303	350	1.980	34.350	27.475	61.7	0.303
400	2.087	34.406	27.512	58.2	0.334	400	2.083	34.400	27.507	58.7	0.334
450	2.185	34.457	27.544	55.1	0.364	450	2.113	34.440	27.537	55.9	0.363
500	2.178	34.493	27.574	52.3	0.392	500	2.166	34.478	27.563	53.4	0.392
550	2.283	34.530	27.595	50.4	0.419	550	2.190	34.508	27.585	51.3	0.419
600	2.253	34.555	27.617	48.2	0.445	600	2.205	34.540	27.609	49.0	0.446
650	2.212	34.586	27.645	45.6	0.470	650	2.196	34.563	27.628	47.2	0.471
679	2.185	34.595	27.655	44.7	0.484	700	2.182	34.586	27.658	45.3	0.496
						750	2.202	34.614	27.668	43.4	0.520
						800	2.220	34.634	27.683	42.0	0.593
						850	2.212	34.654	27.700	40.4	0.566
						900	2.178	34.665	27.711	39.3	0.588
						950	2.137	34.681	27.727	37.8	0.610
						1000	2.155	34.697	27.738	36.7	0.631
						1100	2.106	34.712	27.754	35.2	0.672
						1200	2.038	34.722	27.768	34.0	0.712
						1300	2.006	34.737	27.782	32.6	0.752
						1400	1.964	34.746	27.793	31.6	0.790
						1500	1.932	34.751	27.799	31.0	0.828
						1600	1.848	34.756	27.810	30.0	0.865
						1700	1.759	34.754	27.815	29.5	0.902
						1800	1.646	34.749	27.820	29.0	0.958
						1900	1.502	34.740	27.823	28.7	0.973
						2000	1.378	34.733	27.826	28.4	1.008
						2100	1.271	34.727	27.829	28.1	1.042
						2200	1.164	34.721	27.832	27.9	1.076
						2300	1.036	34.715	27.835	27.5	1.109
						2400	0.933	34.710	27.838	27.3	1.141
						2500	0.853	34.707	27.841	27.0	1.173
						2600	0.778	34.702	27.842	27.0	1.204
						2700	0.708	34.699	27.844	26.8	1.235
						2800	0.637	34.696	27.846	26.6	1.265
						2900	0.575	34.691	27.845	26.6	1.294
						3000	0.520	34.690	27.848	26.4	1.324
						3100	0.460	34.686	27.848	26.4	1.352
						3200	0.397	34.684	27.850	26.2	1.380
						3300	0.322	34.681	27.852	26.0	1.408

KV MELVILLE

INWOMED LEG XIII

Z	T	S	U2	PO4	SI03	NO2	NO3	UT	Z	T	S	U2	WEATHER		DOMINANT WAVES	
													1	49	1	49
1	2.59	33.864	7.90	1.39	6.	0.16	20.5	103.2	0	2.59	33.864	7.90	27.030	103.2	0.000	
53	2.32	33.887	7.85	1.48	6.	0.18	21.2	99.3	10	2.54	33.860	7.89	27.044	102.6	0.010	
73	2.22	33.902	7.83	1.48	7.	0.21	21.6	97.4	20	2.49	33.871	7.88	27.051	101.9	0.021	
94	2.18	33.908	7.86	1.50	7.	0.22	21.9	96.7	30	2.44	33.875	7.87	27.056	101.2	0.031	
109	1.63	33.914	7.65	2.06	29.	0.17	29.2	93.7	50	2.34	33.886	7.85	27.076	99.6	0.051	
124	0.97	33.987	7.29	2.06	29.	0.17	29.3	82.5	75	2.22	33.903	7.83	27.099	97.4	0.075	
145	0.86	34.032	7.00	2.10	36.	0.15	30.3	78.4	100	2.09	33.908	7.80	27.113	96.1	0.100	
176	1.45	34.160	6.02	2.25	41.	0.02	32.4	72.4	125	0.96	35.993	7.20	27.260	82.1	0.122	
217	1.79	34.269	5.29	2.33	51.	0.02	34.2	66.4	150	0.93	34.052	6.92	27.310	77.4	0.142	
258	1.92	34.338	4.87	2.42	59.	0.00	35.4	62.2	200	1.69	34.232	5.53	27.492	68.7	0.179	
307	1.97	34.408	4.52	2.47	67.	0.00	36.1	57.2	250	1.91	34.327	4.94	27.462	62.9	0.212	
368	2.04	34.466	4.32	2.50	72.	0.00	36.1	53.3	300	1.97	34.400	4.56	27.516	57.9	0.243	
429	2.13	34.526	4.12	2.47	77.	0.02	36.0	49.5	400	2.09	34.499	4.21	27.585	51.3	0.299	
490	2.15	34.566	4.07	2.48	80.	0.01	35.7	46.6	500	2.15	34.573	4.07	27.639	46.2	0.350	
560	2.15	34.598	4.08	2.44	82.	0.04	35.0	44.2	600	2.15	34.613	4.08	27.670	43.2	0.397	
641	2.17	34.626	4.07	2.36	83.	0.01	34.8	42.2	700	2.10	34.646	4.07	27.701	40.2	0.442	
732	2.06	34.655	4.07	2.36	87.	0.01	34.3	39.2	800	2.02	34.672	4.09	27.729	37.6	0.485	
813	2.01	34.674	4.09	2.32	89.	0.00	34.4	37.4	1000	1.83	34.698	4.21	27.764	34.3	0.565	
909A	1.94	34.702	4.11	2.24	92.		33.8	34.7	1200	1.89	34.759	4.46	27.792	31.6	0.640	
1020	1.82	34.697	4.24	2.30	94.	0.01	35.6	34.2	1500	1.52	34.735	4.62	27.817	29.2	0.748	
1114A	1.93	34.727	4.35	2.19	92.		32.6	32.8	1750	1.29	34.727	4.64	27.820	20.3	0.832	
1265A	1.86	34.745	4.53	2.13	92.		31.8	30.9	2000	0.99	34.708	4.71	27.833	27.8	0.914	
1418A	1.53	34.727	4.55	2.22	101.		32.6	29.9	2250	0.75	34.698	4.85	27.839	27.2	0.992	
1572A	1.51	34.741	4.67	2.19	101.		32.0	28.7	2500	0.58	34.689	4.79	27.843	26.6	1.066	
1725A	1.323	34.729	4.63	2.20	108.		32.4	26.3	2750	0.46	34.683	4.93	27.846	26.6	1.139	
1877A	1.124	34.717	4.70	2.24	114.		32.8	28.0	3000	0.34	34.678	5.00	27.848	26.4	1.209	
2030A	0.954	34.706	4.72	2.27	118.		33.1	27.7	3250	0.25	34.672	5.05	27.849	26.3	1.277	
2184A	0.807	34.699	4.85	2.25	121.		33.3	27.4	3500	0.19	34.671	5.15	27.851	26.1	1.343	
2387A	0.654	34.694	4.86	2.29	124.		33.5	26.8	3750	0.12	34.668	5.16	27.852	26.0	1.407	
2590A	0.528	34.685	4.76	2.29	126.		33.9	26.8	4000	0.06	34.667	5.25	27.854	25.8	1.469	
2793A	0.44	34.682	4.98	2.29	127.		33.8	26.5	4250	-0.04	34.661	5.37	27.855	25.7	1.529	
2997A	0.340	34.677	4.67U	2.29	129.		34.1	26.4	4500	-0.21	34.655	5.60	27.858	25.4	1.584	
3201A	0.261	34.672	5.01	2.29	130.		34.1	26.3	4750	-0.37	34.643	5.73	27.857	25.5	1.634	
3402A	0.209	34.671	5.15	2.29	131.		34.1	26.1								
3606A	0.168	34.670	5.14	2.30	131.		34.1	26.0								
3809A	0.107	34.666	5.17	2.30	132.		34.2	26.0								
3961A	0.079	34.667	5.22	2.32	133.		34.1	25.8								
4114A	0.013	34.663	5.33	2.31	131.		34.1	25.8								
4214A	-0.024	34.662	5.35	2.30	130.		33.0	25.7								
4314A	-0.083	34.662	5.42	2.30	129.		32.9	25.7								
4416A	-0.135	34.658	5.50	2.28	128.		33.1	25.4								
4567A	-0.272	34.651	5.67	2.29	126.		32.00	25.3								
4719A	-0.351	34.644	5.72	2.28	124.		33.0	25.5								

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INDOMEN LEG XIII CTD

43 D

LATITUDE 51 54.6S	LONGITUDE 28 08.6W	MO/DAY/YR 12/06/78	START TIME 1747 GMT	LATITUDE 51 55.5S	LONGITUDE 28 05.0W	MO/DAY/YR 12/08/78	START TIME 1246 GMT				
Z	T	S	SIGMA T	DT	DU	Z	T	S	SIGMA T	DT	DU
0	2.649	33.866	27.034	103.5	0.000	0	2.980	33.846	26.990	107.7	0.000
10	2.365	33.863	27.039	103.0	0.010	10	2.949	33.846	26.992	107.5	0.011
20	2.335	33.862	27.041	102.9	0.021	20	2.962	33.845	26.990	107.7	0.022
30	2.456	33.869	27.053	101.7	0.031	30	2.940	33.846	26.993	107.4	0.032
40	2.368	33.880	27.069	100.2	0.041	40	2.936	33.847	26.994	107.3	0.043
50	2.323	33.887	27.076	99.3	0.051	50	2.913	33.852	27.009	105.9	0.054
75	2.229	33.901	27.097	97.6	0.076	75	2.328	33.874	27.067	100.4	0.080
100	2.181	33.907	27.106	96.7	0.100	100	1.116	33.968	27.231	84.8	0.103
125	0.962	33.996	27.264	81.8	0.122	125	1.160	34.033	27.280	80.2	0.123
150	1.156	34.100	27.334	75.0	0.142	150	1.338	34.105	27.326	75.8	0.143
175	1.592	34.202	27.386	70.2	0.160	175	1.524	34.172	27.367	72.0	0.162
200	1.912	34.266	27.413	67.6	0.178	200	1.719	34.235	27.405	68.5	0.179
225	1.827	34.292	27.441	65.0	0.194	225	1.824	34.278	27.430	66.0	0.196
250	1.947	34.340	27.470	62.2	0.211	250	1.881	34.329	27.466	62.6	0.213
275	1.995	34.380	27.498	59.5	0.226	275	2.030	34.372	27.489	60.4	0.228
300	1.986	34.412	27.524	57.0	0.241	300	2.019	34.398	27.510	58.5	0.243
350	2.041	34.457	27.556	54.0	0.269	350	2.026	34.447	27.549	54.7	0.272
400	2.083	34.488	27.577	52.0	0.297	400	2.058	34.489	27.580	51.7	0.300
450	2.101	34.531	27.610	49.9	0.323	450	2.178	34.537	27.609	49.0	0.326
500	2.151	34.567	27.635	46.5	0.348	500	2.082	34.552	27.629	47.1	0.351
550	2.196	34.586	27.651	45.1	0.372	550	2.106	34.576	27.646	45.5	0.376
600	2.167	34.603	27.662	43.9	0.396	600	2.103	34.602	27.667	43.5	0.399
650	2.160	34.624	27.680	42.3	0.419	650	2.111	34.623	27.683	42.0	0.422
700	2.041	34.631	27.695	40.9	0.442	700	2.080	34.638	27.697	40.6	0.445
750	2.071	34.656	27.713	39.2	0.463	750	2.047	34.649	27.709	39.5	0.466
800	2.042	34.665	27.722	38.3	0.485	800	2.155	34.671	27.718	38.7	0.488
850	1.990	34.675	27.734	37.1	0.505	850	2.078	34.681	27.732	37.4	0.509
900	1.959	34.685	27.745	36.2	0.526	900	1.943	34.680	27.742	36.4	0.529
950	1.901	34.687	27.751	35.6	0.546	950	1.953	34.696	27.754	35.3	0.549
1000	1.833	34.691	27.759	34.8	0.565	1000	1.888	34.696	27.759	34.8	0.569
1025	1.810	34.692	27.762	34.5	0.575	1100	1.961	34.728	27.779	32.9	0.600
						1200	1.915	34.742	27.794	31.5	0.645
						1300	1.737	34.735	27.800	30.9	0.602
						1400	1.631	34.729	27.805	30.4	0.718
						1500	1.628	34.743	27.816	29.4	0.753
						1600	1.502	34.734	27.818	29.2	0.780
						1700	1.391	34.729	27.822	28.8	0.822
						1800	1.227	34.717	27.824	28.6	0.856
						1900	1.100	34.711	27.828	28.3	0.889
						2000	0.995	34.705	27.830	28.0	0.921
						2100	0.906	34.699	27.831	28.0	0.954
						2200	0.817	34.696	27.834	27.6	0.985
						2300	0.754	34.693	27.836	27.5	1.016
						2400	0.674	34.690	27.839	27.3	1.047
						2500	0.585	34.685	27.840	27.1	1.077
						2600	0.535	34.683	27.841	27.0	1.116
						2700	0.492	34.681	27.842	26.9	1.135
						2800	0.423	34.678	27.844	26.8	1.164
						2900	0.373	34.676	27.845	26.6	1.192
						3000	0.335	34.673	27.845	26.7	1.220
						3100	0.298	34.672	27.846	26.5	1.248
						3200	0.260	34.671	27.848	26.4	1.275
						3300	0.234	34.670	27.848	26.4	1.302
						3400	0.212	34.669	27.849	26.3	1.328
						3500	0.183	34.668	27.849	26.2	1.354
						3600	0.169	34.668	27.850	26.2	1.381
						3700	0.130	34.664	27.849	26.3	1.406
						3800	0.115	34.665	27.851	26.1	1.432
						3900	0.098	34.664	27.851	26.1	1.457
						4000	0.068	34.663	27.851	26.0	1.482
						4100	0.032	34.661	27.852	26.0	1.507
						4200	-0.029	34.661	27.855	25.7	1.531
						4300	-0.085	34.659	27.856	25.6	1.554
						4400	-0.134	34.658	27.858	25.4	1.576
						4500	-0.185	34.656	27.859	25.3	1.597
						4600	-0.319	34.653	27.863	25.0	1.618
						4700	-0.358	34.652	27.864	24.9	1.637
						4732	-0.354	34.651	27.863	25.0	1.643

RV MELVILLE

INSTRUMENT LEG XIII

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LATITUDE 52 01.1S	LONGITUDE 29 05.6W	MO/DAT/YR 12/ 9/78	MESSENGER 0234 0531	TIME GMT	BOTTUM 2868M	WINU 040	SPEED 25KT	WEATHER 5	DOMINANT WAVES						
Z	T	S	U2	P04	S103	N02	N03	UT	Z	T	S	U2	S107	DT	DU
1	1.67	33.993	8.05	1.49	20.	0.27	23.5	86.5	0	1.67	33.993	8.05	27.213	86.5	0.000
26	1.65	33.994	8.02	1.51	20.	0.26	23.6	86.3	10	1.66	33.995	8.04	27.214	86.5	0.009
53	1.57	34.000	8.08	1.54	21.	0.26	23.6	85.3	20	1.65	33.995	8.03	27.215	86.4	0.017
78	1.41	34.012	8.04	1.56	23.	0.26	24.3	83.4	30	1.64	33.996	8.03	27.216	86.2	0.026
104	0.88	34.039	7.92	1.61	35.	0.25	26.5	78.0	50	1.58	34.000	8.07	27.224	85.5	0.043
124	0.19	34.088	7.80	2.08	50.	0.23	29.1	70.5	75	1.44	34.011	8.04	27.243	83.7	0.064
145	0.27	34.193	6.95	2.20	61.	0.14	32.3	62.9	100	0.99	34.034	7.94	27.292	79.1	0.085
165	0.17	34.218	6.81	2.23	64.	0.18	32.5	60.5	125	0.19	34.095	7.76	27.387	70.1	0.103
195	1.08	34.363	5.43	2.34	70.	0.05	34.5	54.6	150	0.23	34.201	6.91	27.471	62.1	0.120
236	1.42	34.455	4.87	2.38	76.	0.03	35.1	49.8	200	1.15	34.379	5.31	27.558	53.8	0.149
287	1.62	34.524	4.50	2.38	81.	0.02	35.2	45.9	250	1.99	34.578	4.74	27.614	48.6	0.175
357	1.68	34.584	4.99	2.36	86.	0.01	34.7	41.8	300	1.64	34.538	4.49	27.651	45.1	0.199
439	1.770	34.655	4.26	2.33	88.	0.02	34.3	38.6	400	1.73	34.615	4.34	27.705	39.9	0.243
519	1.792	34.663	4.33	2.30	92.	0.01	33.8	36.2	500	1.75	34.657	4.31	27.738	36.8	0.263
594A	1.55	34.681	4.30	2.25	94.	0.01	34.0	33.5	600	1.95	34.683	4.30	27.773	33.4	0.320
715	1.574	34.698	4.42	2.26	98.	0.01	32.9	32.4	700	1.57	34.698	4.40	27.784	32.4	0.355
794A	1.54	34.706	4.43	2.25	98.	0.01	33.4	31.6	800	1.53	34.707	4.44	27.794	31.5	0.390
894A	1.39	34.706	4.150	2.24	103.	0.01	33.4	30.5	1000	1.56	34.715	4.67	27.814	29.5	0.457
994A	1.35	34.715	4.67	2.23	105.	0.01	33.1	29.6	1200	1.12	34.712	4.68	27.826	28.4	0.521
1145A	1.17	34.711	4.66	2.23	109.	0.01	33.2	28.7	1500	0.69	34.711	4.74	27.841	26.9	0.613
1295A	1.05	34.712	4.71	2.23	113.	0.00	33.0	27.9	1750	0.58	34.690	4.94	27.865	26.8	0.666
1445A	0.932	34.712	4.73	2.22	115.	0.01	33.0	27.1	2000	0.46	34.688	4.94	27.849	26.2	0.756
1594A	0.795	34.706	4.78	2.25	118.	0.01	33.1	26.8	2250	0.32	34.682	5.04	27.852	26.0	0.824
1744A	0.585	34.689	4.99	2.27	121.	0.00	33.5	26.8	2500	0.18	34.675	5.16	27.854	25.8	0.890
1896A	0.553	34.692	4.95	2.28	121.	0.01	33.4	26.4	2750	0.08	34.670	5.22	27.856	25.6	0.953
2047A	0.412	34.685	4.94	2.29	123.	0.01	33.6	26.2							
2196A	0.346	34.682	5.02	2.29	125.	0.01	33.6	26.0							
2348A	0.271	34.679	5.07	2.30	126.	0.01	33.6	25.9							
2499A	0.182	34.674	5.16	2.30	127.	0.01	33.6	25.8							
2649A	0.113	34.671	5.23	2.28	127.	0.02	33.6	25.7							
2800A	0.060	34.668	5.22	2.28	130.	0.02	33.6	25.6							

INDOMED LEG XIII CTD															
LATITUDE 52 01.95		LONGITUDE 29 45.0W		MO/DAY/YR 12/09/78		START TIME 0449 GMT		LATITUDE 52 01.0S		LONGITUDE 29 45.5W		MO/DAY/YR 12/09/78		START TIME 0124 GMT	
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD				
0	1.689	33.989	27.209	87.0	0.000	0	1.771	33.992	27.205	87.5	0.000				
10	1.664	33.994	27.214	86.4	0.009	10	1.754	33.991	27.205	87.5	0.009				
20	1.661	33.995	27.215	86.3	0.017	20	1.742	33.995	27.208	87.0	0.017				
30	1.646	33.997	27.218	86.1	0.026	30	1.590	33.996	27.221	85.8	0.026				
40	1.554	34.004	27.230	84.9	0.035	40	1.568	34.003	27.228	85.1	0.035				
50	1.526	34.007	27.235	84.5	0.043	50	1.518	34.007	27.235	84.4	0.043				
75	1.364	34.018	27.255	82.6	0.064	75	1.405	34.014	27.249	83.2	0.064				
100	0.797	34.047	27.315	76.9	0.084	100	0.950	34.022	27.285	79.7	0.085				
125	0.167	34.125	27.413	67.6	0.102	125	0.557	34.068	27.346	73.9	0.104				
150	0.198	34.212	27.462	61.1	0.110	150	0.383	34.173	27.440	65.0	0.121				
175	0.449	34.282	27.524	57.1	0.133	175	0.371	34.260	27.511	58.3	0.137				
200	1.116	34.374	27.557	54.0	0.147	200	0.952	34.347	27.546	55.0	0.151				
225	1.368	34.440	27.592	50.6	0.160	225	1.323	34.429	27.587	51.1	0.164				
250	1.539	34.484	27.615	48.4	0.172	250	1.558	34.488	27.617	48.2	0.177				
275	1.590	34.508	27.631	46.9	0.185	275	1.633	34.513	27.632	46.8	0.189				
300	1.632	34.535	27.649	45.2	0.196	300	1.637	34.534	27.648	45.3	0.201				
350	1.687	34.583	27.684	41.9	0.219	350	1.684	34.588	27.688	41.5	0.223				
400	1.784	34.624	27.709	39.5	0.240	400	1.684	34.618	27.712	39.2	0.244				
450	1.768	34.640	27.723	38.2	0.260	450	1.698	34.644	27.732	37.4	0.264				
500	1.718	34.654	27.738	36.8	0.280	500	1.681	34.658	27.744	36.2	0.283				
550	1.738	34.671	27.750	35.6	0.299	550	1.691	34.672	27.755	35.2	0.302				
600	1.682	34.680	27.762	34.5	0.318	600	1.664	34.685	27.767	34.0	0.320				
650	1.671	34.691	27.771	33.6	0.336	650	1.649	34.695	27.776	33.2	0.338				
700	1.590	34.697	27.782	32.6	0.354	700	1.592	34.696	27.781	32.7	0.356				
718	1.576	34.698	27.784	32.4	0.360	750	1.608	34.705	27.787	32.1	0.374				
						800	1.552	34.702	27.794	31.5	0.391				
						850	1.428	34.705	27.800	30.9	0.408				
						900	1.433	34.714	27.807	30.2	0.425				
						950	1.403	34.716	27.811	29.9	0.441				
						1000	1.348	34.716	27.815	29.5	0.458				
						1100	1.212	34.712	27.821	28.9	0.490				
						1200	1.078	34.709	27.828	28.3	0.521				
						1300	1.013	34.708	27.831	27.9	0.552				
						1400	0.972	34.712	27.837	27.4	0.583				
						1500	0.859	34.706	27.840	27.1	0.613				
						1600	0.778	34.703	27.842	26.9	0.642				
						1700	0.692	34.700	27.846	26.6	0.672				
						1800	0.569	34.688	27.843	26.8	0.700				
						1900	0.547	34.691	27.847	26.5	0.729				
						2000	0.458	34.685	27.849	26.3	0.757				
						2100	0.384	34.683	27.850	26.2	0.784				
						2200	0.344	34.681	27.851	26.1	0.811				
						2300	0.294	34.678	27.851	26.1	0.848				
						2400	0.242	34.678	27.854	25.8	0.865				
						2500	0.177	34.673	27.854	25.8	0.891				
						2600	0.155	34.672	27.854	25.8	0.916				
						2700	0.100	34.669	27.855	25.7	0.942				
						2800	0.064	34.669	27.857	25.6	0.966				
						2845	0.068	34.668	27.855	25.7	0.978				

HV RELVILLE												INDOMED LEG XIII						
	LATITUDE	LONGITUDE	MO/DAY/YR	MESSNGNR	TIME	BOTTOM	WIND	SPEED	WEATHER	DUMINANT	WAVES							
Z	T	S	O2	PW4	SI03	N02	N03	DT	Z	I	S	O2	SI03	DT	DD			
1	5.08	34.026	7.31	1.41	4.	0.21	19.9	114.6	0	5.08	34.026	7.31	26.917	114.6	0.000			
62	5.06	34.027	7.32	1.43	4.	0.21	20.2	114.3	10	5.08	34.027	7.31	26.917	114.6	0.011			
92	4.21	34.130	6.86	1.71	9.	0.08	24.5	97.7	20	5.07	34.028	7.31	26.918	114.5	0.023			
122	4.04	34.136	6.92	1.73	10.	0.03	24.7	95.6	30	5.07	34.028	7.31	26.919	114.5	0.034			
153	3.95	34.140	6.85	1.72	11.	0.05	24.9	94.4	50	5.06	34.028	7.32	26.920	114.4	0.057			
193	3.64	34.138	6.89	1.79	13.	0.03	25.5	91.6	75	4.68	34.073	7.11	26.998	106.9	0.085			
224	3.35	34.123	6.99	1.81	12.	0.03	25.9	90.1	100	4.16	34.133	6.88	27.161	97.1	0.111			
266	3.42	34.153	6.60	1.07	17.	0.02	27.3	88.4	125	4.03	34.136	6.91	27.119	95.4	0.135			
306	3.24	34.156	6.46	1.94	20.	0.02	27.8	86.6	150	3.96	34.141	6.86	27.129	96.5	0.159			
357	3.01	34.157	6.39	1.98	22.	0.02	28.7	84.5	200	3.56	34.135	6.92	27.164	91.2	0.206			
418	2.76	34.166	6.17	2.07	27.	0.01	29.9	81.7	250	3.58	34.141	6.77	27.187	89.0	0.252			
485	2.52	34.196	5.89	2.17	33.	0.01	31.3	77.5	300	3.27	34.158	6.47	27.210	86.9	0.297			
562	2.50	34.242	5.50	2.25	40.	0.01	32.3	75.9	400	2.83	34.163	6.24	27.254	82.6	0.384			
638	2.53	34.295	5.13	2.33	46.	0.01	33.4	70.1	500	2.52	34.206	5.82	27.316	76.7	0.467			
714	2.48	34.345	4.83	2.37	54.	0.01	34.4	65.9	600	2.52	34.269	5.31	27.366	72.0	0.544			
790	2.64	34.420	4.42	2.41	60.	0.01	34.9	60.8	700	2.48	34.335	4.89	27.422	66.7	0.617			
865	2.59	34.465	4.29	2.44	65.	0.01	35.1	57.7	800	2.63	34.455	4.39	27.469	60.3	0.684			
940	2.50	34.497	4.18	2.44	69.	0.01	35.3	54.6	1000	2.47	34.535	4.11	27.563	51.5	0.807			
1014	2.46	34.540	4.10	2.45	73.	0.01	35.1	51.0	1200	2.36	34.612	4.04	27.653	44.8	0.915			
1056A	2.52	34.582	4.12	2.34	71.	0.01	34.9	51.3	1500	2.45	34.728	4.36	27.739	36.7	1.060			
1209	2.34	34.617	4.03	2.44	81.	0.01	34.6	44.2	1750	2.27	34.746	4.47	27.768	32.9	1.170			
1247A	2.32	34.630	4.02	2.39	84.	0.00	34.6	43.1	2000	2.23	34.780	4.72	27.799	31.1	1.276			
1343A	2.31	34.667	4.14	2.32	84.	0.00	35.7	40.2	2250	1.79	34.744	4.50	27.804	30.6	1.378			
1440A	2.25	34.680	4.04	2.18	86.	0.01	35.5	38.8	2500	1.58	34.749	4.73	27.824	26.6	1.474			
1535A	2.56	34.755	4.55	2.07	71.	0.00	30.3	35.6	2750	1.28	34.727	4.68	27.828	26.3	1.565			
1678A	2.227	34.725	4.35	2.19	85.	0.00	32.0	35.2	3000	1.09	34.716	4.78	27.836	27.5	1.653			
1822A	2.347	34.771	4.63	2.06	77.	0.00	30.1	32.6	3250	0.77	34.698	4.86	27.838	27.3	1.735			
1967A	2.241	34.776	4.69	2.05	79.	0.00	29.6	31.4	3500	0.58	34.689	4.92	27.843	26.8	1.813			
2110A	2.180	34.784	4.76	1.99	78.	0.00	29.2	30.3	3750	0.40	34.681	5.05	27.867	26.4	1.886			
2301A	1.643	34.728	4.42	2.20	104.	0.01	32.4	30.6	4000	0.28	34.674	5.12	27.886	26.3	1.956			
2993A	1.587	34.749	4.73	2.13	98.	0.00	31.1	28.6	4250	0.23	34.674	5.16	27.851	26.1	2.023			
2666A	1.337	34.724	4.65	2.21	102.	0.00	32.4	28.8	4500	0.18	34.670	5.20	27.850	26.1	2.088			
2078A	1.175	34.731	4.76	2.22	112.	0.01	32.1	27.2	4750	0.17	34.667	5.20	27.849	26.3	2.153			
3071A	0.952	34.706	4.79	2.28	119.	0.00	32.8	27.7	5000	0.08	34.663	5.34	27.851	26.1	2.217			
3312A	0.720	34.695	4.88	2.31	123.	0.00	35.0	27.1	5250	0.03	34.651	5.35	27.884	26.7	2.278			
3555A	0.540	34.687	4.94	2.31	126.	0.00	35.3	26.7										
3796A	0.371	34.679	5.07	2.35	129.	0.00	33.5	26.4										
4040A	0.270	34.673	5.13	2.36	130.	0.00	33.5	26.3										
4284A	0.220	34.673	5.16	2.35	131.	0.01	33.5	26.0										
4530A	0.181	34.669	5.21	2.36	131.	0.00	33.5	26.2										
4777A	0.172	34.666	5.20	2.35	131.	0.00	33.1	26.3										
5026A	0.064	34.662	5.36	2.35	130.	0.00	33.4	26.1										
5224A	0.030	34.652	5.39	2.30	127.	0.01	33.2	26.7										

INDOMED LEG XIII CTD									
45 S			INDOMED LEG XIII CTD				45 N		
LATITUDE	LONGITUDE	MN/DAY/YR	START TIME		LATITUDE	LONGITUDE	MN/DAY/YR	START TIME	
48 42.7S	36 08.7W	12/11/76	0609 GMT		48 45.8S	36 10.2W	12/11/76	0020 GMT	
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T
0	5.092	34.020	26.911	115.2	0.000	0	5.217	34.026	26.901
10	5.087	34.022	26.913	115.0	0.012	10	5.218	34.026	26.901
20	5.088	34.021	26.912	115.1	0.023	20	5.222	34.029	26.903
30	5.087	34.021	26.912	115.1	0.035	30	5.228	34.031	26.904
40	5.080	34.022	26.914	114.9	0.046	40	5.231	34.031	26.903
50	5.081	34.022	26.914	114.9	0.058	50	5.232	34.032	26.904
75	4.303	34.119	27.077	99.4	0.085	75	5.068	34.042	26.929
100	4.106	34.153	27.109	96.4	0.109	100	4.226	34.130	27.094
125	4.007	34.137	27.122	95.2	0.133	125	4.102	34.134	27.110
150	3.915	34.137	27.132	94.3	0.157	150	3.969	34.135	27.124
175	3.655	34.135	27.156	91.9	0.181	175	3.720	34.128	27.144
200	3.411	34.122	27.169	90.7	0.204	200	3.553	34.136	27.167
225	3.473	34.148	27.184	89.3	0.227	225	3.492	34.145	27.180
250	3.596	34.151	27.194	88.4	0.250	250	3.438	34.152	27.191
275	3.265	34.148	27.204	87.4	0.272	275	3.312	34.152	27.203
300	3.135	34.149	27.217	86.2	0.294	300	3.208	34.154	27.214
350	2.991	34.156	27.235	84.4	0.338	350	2.978	34.164	27.243
400	2.810	34.167	27.260	82.1	0.381	400	2.557	34.151	27.269
450	2.463	34.172	27.294	78.9	0.422	450	2.489	34.181	27.299
500	2.361	34.203	27.327	75.7	0.462	500	2.413	34.216	27.333
550	2.678	34.272	27.355	73.0	0.501	550	2.700	34.279	27.359
600	2.666	34.296	27.376	71.1	0.539	600	2.499	34.295	27.389
650	2.446	34.309	27.405	68.4	0.575	650	2.517	34.339	27.423
700	2.490	34.343	27.428	66.1	0.611	700	2.494	34.368	27.448
750	2.497	34.386	27.462	62.9	0.645	750	2.442	34.428	27.483
800	2.612	34.435	27.491	60.2	0.678	800	2.571	34.444	27.502
850	2.579	34.455	27.510	58.4	0.710	850	2.654	34.482	27.525
900	2.623	34.487	27.532	56.3	0.741	900	2.553	34.500	27.548
950	2.485	34.492	27.548	54.8	0.771	950	2.454	34.503	27.559
1000	2.460	34.527	27.577	52.0	0.801	1000	2.460	34.532	27.581
1100	2.523	34.586	27.619	48.0	0.857	1100	2.420	34.571	27.616
1200	2.367	34.602	27.645	45.6	0.910	1200	2.346	34.607	27.651
1225	2.348	34.608	27.652	45.0	0.923	1300	2.330	34.643	27.681
						1400	2.349	34.684	27.712
						1500	2.445	34.719	27.732
						1600	2.627	34.774	27.760
						1700	2.195	34.725	27.758
						1800	2.309	34.764	27.779
						1900	2.341	34.780	27.789
						2000	2.349	34.799	27.804
						2100	2.222	34.791	27.808
						2200	1.784	34.729	27.793
						2300	1.715	34.740	27.807
						2400	1.715	34.752	27.817
						2500	1.529	34.736	27.818
						2600	1.389	34.727	27.821
						2700	1.343	34.727	27.824
						2800	1.246	34.725	27.829
						2900	1.170	34.725	27.835
						3000	1.061	34.717	27.835
						3100	0.916	34.705	27.835
						3200	0.872	34.706	27.839
						3300	0.757	34.700	27.841
						3400	0.674	34.695	27.843
						3500	0.579	34.689	27.844
						3600	0.598	34.684	27.844
						3700	0.425	34.681	27.846
						3800	0.366	34.681	27.850
						3900	0.319	34.677	27.849
						4000	0.306	34.678	27.851
						4100	0.251	34.674	27.850
						4200	0.217	34.673	27.852
						4300	0.198	34.671	27.851
						4400	0.186	34.671	27.852
						4500	0.180	34.671	27.852
						4600	0.169	34.670	27.852
						4700	0.164	34.668	27.850
						4800	0.164	34.667	27.850
						4900	0.120	34.665	27.850
						5000	0.071	34.662	27.851
						5100	0.054	34.660	27.850
						5200	0.020	34.657	27.849
						5245	0.013	34.658	27.850

HV MELVILLE

INHOMED LEG XIII

46

Z	T	S	U2	P04	S103	NO2	NO3	DT	Z	T	S	O2	S107	DT	DD	DOMINANT WAVES					
																250	30KT	2	250	6	7
1	3.18	33.838	1.32	1.	0.19	19.7	110.1	0	3.18	33.838		26.365	110.1	0.000							
21	3.18	33.837	0.14	1.34	1.	0.20	19.9	110.1	10	3.18	33.839		26.365	110.1	0.011						
47	3.18	33.837	7.97	1.35	1.	0.19	19.9	110.1	20	3.18	33.838		26.364	110.1	0.022						
73	3.09	33.852	7.91	1.37	2.	0.20	20.2	100.2	30	3.18	33.838	6.07	26.364	110.1	0.033						
99	2.55	33.920	7.71	1.66	12.	0.19	23.8	98.6	56	3.17	33.840	7.96	26.367	109.9	0.055						
129	1.98	33.952	7.64	1.80	16.	0.16	25.9	91.9	75	3.06	33.858	7.89	26.391	107.6	0.082						
165	1.65	33.984	7.46	1.06	18.	0.10	27.3	87.0	100	2.53	33.923	7.71	27.089	98.3	0.100						
206	1.83	34.052	7.00	1.94	22.	0.02	28.5	83.2	125	2.05	33.951	7.65	27.150	92.5	0.132						
257	1.83	34.105	6.56	2.05	28.	0.01	30.3	79.2	150	1.72	33.971	7.55	27.191	88.7	0.155						
307	1.76	34.143	6.32	2.12	33.	0.00	31.5	75.8	200	1.79	34.043	7.87	27.243	83.7	0.198						
358	1.90	34.196	5.85	2.19	39.	0.00	32.6	72.8	250	1.83	34.099	6.61	27.285	79.7	0.240						
408	2.07	34.253	5.39	2.24	45.	0.00	33.7	67.7	300	1.77	34.139	6.35	27.322	76.2	0.279						
459	2.154		5.12	2.26	45.	0.01	33.2		400	2.04	34.245	5.96	27.386	70.2	0.354						
510	2.244	34.329	4.87	2.35	54.	0.01	34.9	65.3	500	2.23	34.323	4.91	27.433	65.7	0.424						
560	2.162	34.320 U	4.74	2.34	55.	0.00	34.8		600	2.25	34.396	4.59	27.490	60.3	0.489						
610	2.276	34.406	4.55	2.41	63.	0.04	35.6	59.7	700	2.34	34.465	4.23	27.554	50.2	0.550						
661	2.357	34.450	4.37	2.45	67.	0.00	35.9	57.0	800	2.29	34.529	4.11	27.593	50.6	0.606						
735A	2.30	34.511	4.12	2.37	73.	0.00	36.0	51.9	1000	2.24	34.604	4.02	27.656	49.5	0.710						
836	2.287	34.553	4.10	2.35	76.	0.00	36.1	50.2	1200	2.13	34.652	4.00	27.704	40.1	0.806						
939A	2.26	34.582	4.03	2.39	81.	0.01	35.7	46.2	1500	1.93	34.693	4.19	27.753	35.8	0.938						
1091A	2.20	34.626	4.01	2.36	86.	0.00	35.4	42.5	1750	1.79	34.713	4.20	27.779	32.8	1.040						
1244A	2.10	34.659	3.99	2.10U	89.	0.01	34.7	39.2	2000	1.60	34.717	4.41	27.797	31.1	1.138						
1447A	1.96	34.688	4.14	2.26	94.	0.00	34.2	35.9	2250	1.41	34.719	4.56	27.818	29.7	1.232						
1650A	1.85	34.706	4.15	2.19	99.	0.00	33.9	33.8	2500	1.23	34.719	4.59	27.825	26.5	1.322						
1852A	1.73	34.719	4.28	2.25	102.	0.00	33.7	31.9	2750	1.02	34.710	4.75	27.832	27.9	1.407						
2054A	1.55	34.716	4.45	2.21	105.	0.00	33.4	30.9	3000	0.90	34.710	4.78	27.840	27.1	1.490						
2256A	1.41	34.719	4.54	2.21	109.	0.00	33.4	29.7	3250	0.70	34.699	4.94	27.844	26.7	1.569						
2457A	1.27	34.720	4.55	2.20	114.	0.00	33.4	28.7	3500	0.52	34.691	5.02	27.868	26.4	1.645						
2647A	1.10	34.715	4.74	2.19	116.	0.01	33.4	28.0	3750	0.39	34.667	5.09	27.883	25.9	1.716						
2848A	0.956	34.706	4.76	2.19	119.	0.01	33.7	27.7	4000	0.27	34.678	5.14	27.853	25.9	1.784						
3047A	0.879	34.711	4.79	2.21	120.	0.01	33.4	26.9	4250	0.24	34.676	5.19	27.852	26.0	1.851						
3247A	0.705	34.659	4.94	2.24	123.	0.00	33.7	26.8	4500	0.19	34.674	5.23	27.853	25.9	1.916						
3494A	0.527	34.690	5.02	2.25	126.	0.00	34.0	26.4	4750	0.16	34.672	5.19	27.852	26.0	1.981						
3741A	0.396	34.687	5.09	2.25	129.	0.01	34.2	25.9	5000	0.18	34.670	5.29	27.850	26.1	2.046						
3987A	0.268	34.678	5.14	2.29	131.	0.00	34.1	25.9	5250	0.16	34.666	5.32	27.848	26.3	2.111						
4233A	0.240	34.675	5.18	2.30	131.	0.00	35.5	26.0													
4478A	0.194	34.673	5.24	2.29	131.	0.01	34.0	25.9													
4721A	0.184	34.671	5.18	2.26	132.	0.00	34.1	26.0													
4963A	0.180	34.669	5.28	2.26	132.	0.00	34.2	26.2													
5156A	0.175	34.669	5.31	2.29	131.	0.00	34.2	26.1													
5300A	0.157	34.663	5.32	2.27	130.	0.02	34.1	26.5													

46 S						INDOMED LEG XIII CTD						46 D							
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	Z	T	S	SIGMA T	DT	DD	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	Z	T	S	SIGMA T	DT	DD
48 36.0S	39 01.3W	12/12/78	1657 GMT	48 36.2S	39 04.4W	12/12/78	1221 GMT												
0	3.172	35.835	26.963	110.2	0.000	0	3.120	35.833	26.967	109.9	0.000	0	3.167	35.835	26.969	109.7	0.011	0	3.167
10	3.167	35.839	26.967	109.9	0.011	10	3.116	35.835	26.969	109.7	0.011	10	3.106	35.835	26.969	109.6	0.022	10	3.106
20	3.171	35.848	26.966	110.0	0.022	20	3.088	35.835	26.972	109.4	0.043	20	3.058	35.837	26.973	109.3	0.044	20	3.058
30	3.151	35.849	26.969	109.7	0.033	30	3.085	35.837	26.977	108.9	0.055	30	3.054	35.839	26.977	108.9	0.055	30	3.054
40	3.140	35.841	26.971	109.5	0.044	40	3.085	35.837	26.977	108.9	0.055	40	3.085	35.837	26.977	108.9	0.055	40	3.085
50	3.139	35.841	26.971	109.5	0.055	50	3.085	35.837	26.977	108.9	0.055	50	3.054	35.849	26.993	107.4	0.082	50	3.054
75	3.140	35.840	26.970	109.6	0.082	75	2.965	35.849	26.993	107.4	0.082	75	2.965	35.849	26.993	107.4	0.082	75	2.965
100	2.802	33.894	27.044	102.6	0.109	100	2.167	33.881	27.086	98.6	0.108	100	2.167	33.881	27.086	98.6	0.108	100	2.167
125	2.112	33.936	27.134	94.0	0.134	125	1.454	33.907	27.160	91.6	0.152	125	1.454	33.907	27.160	91.6	0.152	125	1.454
150	1.660	33.960	27.187	89.0	0.157	150	1.807	33.999	27.208	87.0	0.154	150	1.807	33.999	27.208	87.0	0.154	150	1.807
175	1.829	34.017	27.221	85.5	0.179	175	1.909	34.046	27.238	84.2	0.176	175	1.909	34.046	27.238	84.2	0.176	175	1.909
200	1.677	34.027	27.240	84.0	0.200	200	1.911	34.072	27.258	82.3	0.197	200	1.911	34.072	27.258	82.3	0.197	200	1.911
225	1.803	34.068	27.263	81.8	0.221	225	2.049	34.107	27.276	80.6	0.217	225	2.049	34.107	27.276	80.6	0.217	225	2.049
250	1.850	34.100	27.285	79.7	0.241	250	1.672	34.088	27.289	79.4	0.247	250	1.672	34.088	27.289	79.4	0.247	250	1.672
275	1.828	34.126	27.308	77.6	0.261	275	1.797	34.138	27.320	76.4	0.257	275	1.797	34.138	27.320	76.4	0.257	275	1.797
300	1.797	34.149	27.329	75.6	0.281	300	1.732	34.147	27.332	75.3	0.276	300	1.732	34.147	27.332	75.3	0.276	300	1.732
350	1.920	34.209	27.367	71.9	0.318	350	1.894	34.197	27.359	72.7	0.314	350	1.894	34.197	27.359	72.7	0.314	350	1.894
400	2.083	34.266	27.400	68.8	0.354	400	1.963	34.240	27.389	69.9	0.350	400	1.963	34.240	27.389	69.9	0.350	400	1.963
450	2.139	34.300	27.423	66.7	0.389	450	2.103	34.294	27.421	66.9	0.385	450	2.103	34.294	27.421	66.9	0.385	450	2.103
500	2.268	34.350	27.452	63.9	0.423	500	2.261	34.346	27.450	64.1	0.419	500	2.261	34.346	27.450	64.1	0.419	500	2.261
550	2.188	34.376	27.479	61.3	0.455	550	2.293	34.387	27.480	61.3	0.452	550	2.293	34.387	27.480	61.3	0.452	550	2.293
600	2.247	34.417	27.507	58.6	0.487	600	2.266	34.421	27.509	58.5	0.483	600	2.266	34.421	27.509	58.5	0.483	600	2.266
650	2.363	34.461	27.533	56.2	0.517	650	2.300	34.450	27.529	56.5	0.514	650	2.300	34.450	27.529	56.5	0.514	650	2.300
700	2.335	34.484	27.554	54.3	0.546	700	2.288	34.478	27.553	54.3	0.543	700	2.288	34.478	27.553	54.3	0.543	700	2.288
750	2.319	34.508	27.574	52.3	0.575	750	2.317	34.507	27.574	52.4	0.572	750	2.317	34.507	27.574	52.4	0.572	750	2.317
800	2.296	34.527	27.591	50.7	0.603	800	2.298	34.530	27.593	50.5	0.599	800	2.298	34.530	27.593	50.5	0.599	800	2.298
847	2.286	34.549	27.610	48.9	0.628	850	2.301	34.546	27.606	49.3	0.626	850	2.301	34.546	27.606	49.3	0.626	850	2.301
						900	2.292	34.565	27.622	47.8	0.653	900	2.273	34.585	27.639	46.1	0.679	900	2.273
						1000	2.266	34.602	27.654	44.8	0.704	1000	2.220	34.629	27.679	42.4	0.753	1000	2.220
						1100	2.144	34.645	27.698	40.6	0.800	1100	2.089	34.661	27.715	39.0	0.846	1100	2.089
						1200	2.033	34.679	27.734	37.2	0.890	1200	1.972	34.693	27.750	35.7	0.954	1200	1.972
						1300	1.906	34.704	27.764	34.3	0.975	1300	1.837	34.715	27.783	32.5	1.056	1300	1.837
						1400	1.775	34.715	27.788	32.1	1.096	1400	1.757	34.714	27.788	32.1	1.096	1400	1.757
						1500	1.719	34.719	27.805	30.4	1.155	1500	1.519	34.719	27.805	30.4	1.155	1500	1.519
						1600	1.435	34.717	27.810	30.0	1.210	1600	1.906	34.704	27.764	34.3	0.975	1600	1.906
						1700	1.837	34.710	27.774	33.4	1.016	1700	1.837	34.710	27.774	33.4	1.016	1700	1.837
						1800	1.775	34.715	27.783	32.5	1.056	1800	1.665	34.711	27.788	32.1	1.096	1800	1.665
						2000	1.575	34.714	27.797	31.2	1.155	2000	1.519	34.719	27.805	30.4	1.173	2000	1.519
						2100	1.435	34.717	27.810	30.0	1.210	2100	1.519	34.719	27.805	30.4	1.173	2100	1.519
						2200	1.375	34.720	27.816	29.4	1.246	2200	1.435	34.717	27.810	30.0	1.210	2200	1.435
						2300	1.279	34.717	27.821	29.0	1.282	2300	1.375	34.720	27.816	29.4	1.246	2300	1.375
						2400	1.234	34.719	27.825	28.5	1.318	2400	1.234	34.719	27.825	28.5	1.318	2400	1.234
						2500	1.152	34.714	27.827	28.4	1.353	2500	1.060	34.709	27.829	28.2	1.387	2500	1.060
						2600	0.963	34.705	27.832	27.9	1.421	2600	0.963	34.690	27.849	26.3	1.640	2600	0.963
						2800	0.896	34.692	27.834	27.7	1.454	2800	0.896	34.709	27.840	27.1	1.487	2800	0.896
						3000	0.811	34.690	27.840	27.1	1.487	3000	0.806	34.692	27.840	27.1	1.487	3000	0.806
						3200	0.733	34.703	27.845	26.6	1.550	3200	0.652	34.699	27.847	26.5	1.581	3200	0.652
						3400	0.566	34.692	27.847	26.5	1.611	3400	0.504	34.690	27.849	26.3	1.640	3400	0.504
						3500	0.448	34.689	27.851	26.1	1.669	3500	0.390	34.686	27.852	26.0	1.697	3500	0.390
						3600	0.350	34.684	27.853	25.9	1.725	3600	0.304	34.681	27.853	25.9	1.752	3600	0.304
						3700	0.257	34.679	27.854	25.6	1.779	3700	0.183	34.672	27.853	25.9	1.961	3700	0.183
						4100	0.246	34.680	27.855	25.7	1.805	4100	0.177	34.671	27.852	26.0	1.987	4100	0.177
						4200	0.244	34.677	27.853	25.9	1.851	4200	0.180	34.669	27.850	26.2	2.059	4200	0.180
						4300	0.221	34.676	27.854	25.6	1.858	4300	0.179	34.668	27.850	26.2	2.065	4300	0.179
						4400	0.196	34.675	27.854	25.6	1.884	4400	0.186	34.672	27.852	26.0	1.909	4400	0.186
						4600	0.182	34.671	27.852	26.0	1.945	4600	0.179	34.671	27.852	26.0	1.945	4600	0.179
						4700	0.183	34.672	27.853	25.9	1.961	4700	0.179	34.671	27.852	26.0	1.987	4700	0.179
						4800	0.177												

BY MELVILLE

ANDOMED LEG XIII

47

LATITUDE 46 50.0S	LONGITUDE 55 04.6W	MO/DAY/YR 12/16/78	MESSENGER TIME			BOTTOM 6054M	WIND 320 22KT	SPEED	WEATHER	DOMINANT WAVES					
			NO2	NO3	DT					Z	T	S			
Z	T	S	02	P04	SI03	NO2	NO3	DT	Z	T	S	02	310T	UT	DD
1	12.16	34.932	6.75	0.49	0.	0.17	4.5	151.8	0	12.16	34.932	6.73	26.524	151.8	0.000
51	11.65	34.946	6.25	0.54	0.	0.21	5.3	141.6	10	12.04	34.936	6.62	26.550	149.4	0.015
101	11.52	34.941	6.14	0.61	1.	0.29	5.7	139.6	20	11.92	34.939	6.50	26.576	146.9	0.030
151	10.34	34.925	5.85	1.00	3.	0.02	12.7	120.5	50	11.82	34.942	6.41	26.598	144.9	0.045
201	8.75	34.660	5.79	1.17	5.	0.01	16.0	115.0	50	11.66	34.946	6.26	26.631	141.7	0.075
251	7.02	34.491	5.70	1.53	7.	0.01	21.6	107.0	75	11.59	34.946	6.19	26.642	140.6	0.109
300	5.56	34.272	6.03	1.68	9.	0.01	24.4	101.6	100	11.52	34.941	6.14	26.652	139.7	0.145
401	4.46	34.197	6.36	1.80	12.	0.01	26.1	95.2	125	11.04	34.949	6.00	26.747	130.7	0.179
499	3.95	34.182	6.45	1.82	14.	0.01	26.8	91.2	150	10.37	34.926	5.86	26.850	120.9	0.211
649	3.35	34.179	6.22	1.99	20.	0.00	29.3	85.8	200	9.78	34.667	5.79	26.911	115.1	0.272
798	2.85	34.213	5.79	2.13	31.	0.00	31.5	78.9	250	7.05	34.446	5.78	26.996	107.1	0.331
998	2.72	34.315	5.02	2.31	46.	0.00	34.0	70.1	300	5.56	34.272	6.03	27.059	103.6	0.384
1199	2.778	34.442	4.45	2.42	57.	0.00	34.9	61.0	400	4.46	34.198	6.36	27.121	95.2	0.486
1398	2.695	34.524	4.22	2.39	65.	0.00	35.2	54.1	500	3.95	34.183	6.45	27.164	91.2	0.583
1599	2.700	34.621	4.25	2.31	68.	0.00	35.5	46.8	600	3.53	34.178	6.35	27.202	87.6	0.677
1798	2.690	34.689	4.36	2.21	69.	0.00	32.5	41.6	700	3.15	34.187	6.09	27.245	83.5	0.760
1999	2.664	34.740	4.35	2.10	68.	0.00	30.9	37.6	800	2.85	34.215	5.78	27.294	78.8	0.854
2200	2.519	34.762	4.69	2.08	72.	0.00	30.4	34.7	1000	2.72	34.317	5.01	27.387	70.0	1.013
2400	2.450	34.784	4.80	1.99	71.	0.00	29.5	32.5	1200	2.78	34.443	4.45	27.483	61.0	1.157
2602	2.249	34.780	4.82	2.01	77.	0.00	29.7	31.2	1500	2.70	34.376	4.24	27.595	50.3	1.349
2802	2.075	34.776	4.89	2.04	82.	0.00	29.8	30.1	1750	2.69	34.676	4.33	27.676	42.7	1.490
3004	1.878	34.761	4.79	2.10	90.	0.00	30.7	29.8	2000	2.66	34.741	4.55	27.750	37.5	1.619
3237	1.551	34.787	4.82	2.21	104.	0.00	32.0	29.1	2250	2.50	34.769	4.68	27.766	34.1	1.740
3507	1.292	34.724	4.86	2.23	111.	0.00	32.5	28.5	2500	2.36	34.783	4.81	27.790	31.8	1.856
									2750	2.12	34.777	4.88	27.805	30.4	1.967
									3000	1.88	34.761	4.79	27.812	29.8	2.074
									3250	1.54	34.739	4.82	27.818	29.2	2.177
									3500	1.30	34.725	4.86	27.825	26.5	2.275

RV MELVILLE

INDOMED LEE XIII

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LATITUDE 58 40.0S	LONGITUDE 57 02.6W	MO/DAY/YR 12/10/78	MESSENGER TIME			BOTTOM 741M	WIND 300	SPEED 14KT	WEATHER			DOMINANT WAVES			
			0450	GMT	DT				Z	T	S	02	SIGT	DT	DD
1	7.70	34.039	7.93	1.07	1.	0.18	15.1	146.1	0	7.70	34.039	7.93	26.585	146.1	0.000
22	7.62	34.054		1.07	1.	0.17	15.4	143.9	10	7.67	34.047	7.75	26.595	145.1	0.015
42	7.01	34.096		1.20	1.	0.15	16.5	132.6	20	7.63	34.054	7.56	26.606	145.1	0.029
62	6.27	34.110	6.98	1.30	2.	0.14	17.6	122.1	30	7.42	34.072	7.39	26.651	139.8	0.043
77	5.85	34.114	6.85	1.30	3.	0.11	17.4	116.8	50	6.71	34.105	7.11	26.774	128.1	0.070
103	4.82	34.132	7.09	1.55	9.	0.16	21.0	105.6	75	5.92	34.125	6.86	26.887	137.5	0.101
123	4.63	34.136	7.07	1.56	9.	0.20	21.8	101.5	100	4.93	34.131	7.05	27.017	105.2	0.129
149	4.39	34.157	6.92	1.61	10.	0.15	23.4	97.5	125	4.61	34.139	7.06	27.059	101.1	0.155
174	4.27	34.168	6.91	1.62	11.	0.03	23.9	95.4	150	4.56	34.162	6.92	27.104	96.9	0.180
205	4.15	34.169	6.90	1.65	11.	0.03	24.3	94.2	200	4.17	34.170	6.90	27.131	94.3	0.229
245	3.96	34.164	6.89	1.65	12.	0.02	25.0	92.7	250	3.95	34.164	6.89	27.149	92.6	0.277
276	3.90	34.161	6.89	1.70	13.	0.02	25.1	92.3	300	3.83	34.159	6.89	27.157	91.8	0.324
327	3.785	34.155	6.87	1.72	14.	0.02	25.5	91.2	400	3.52	34.148	6.88	27.179	89.8	0.418
393	3.554	34.149	6.86	1.75	15.	0.03	26.0	90.0	500	3.12	34.142	6.66	27.212	86.6	0.509
469	3.202	34.137	6.76	1.84	16.	0.02	27.5	87.7	600	3.02	34.173	6.25	27.246	83.4	0.598
550	3.044	34.155	6.44	1.94	22.	0.01	28.7	84.9	700	2.96	34.212	5.85	27.282	80.1	0.684
630	3.017	34.184	6.13	1.98	27.	0.02	29.9	82.5							
711	2.992	34.215	5.81	2.07	32.	0.01	31.1	79.6							

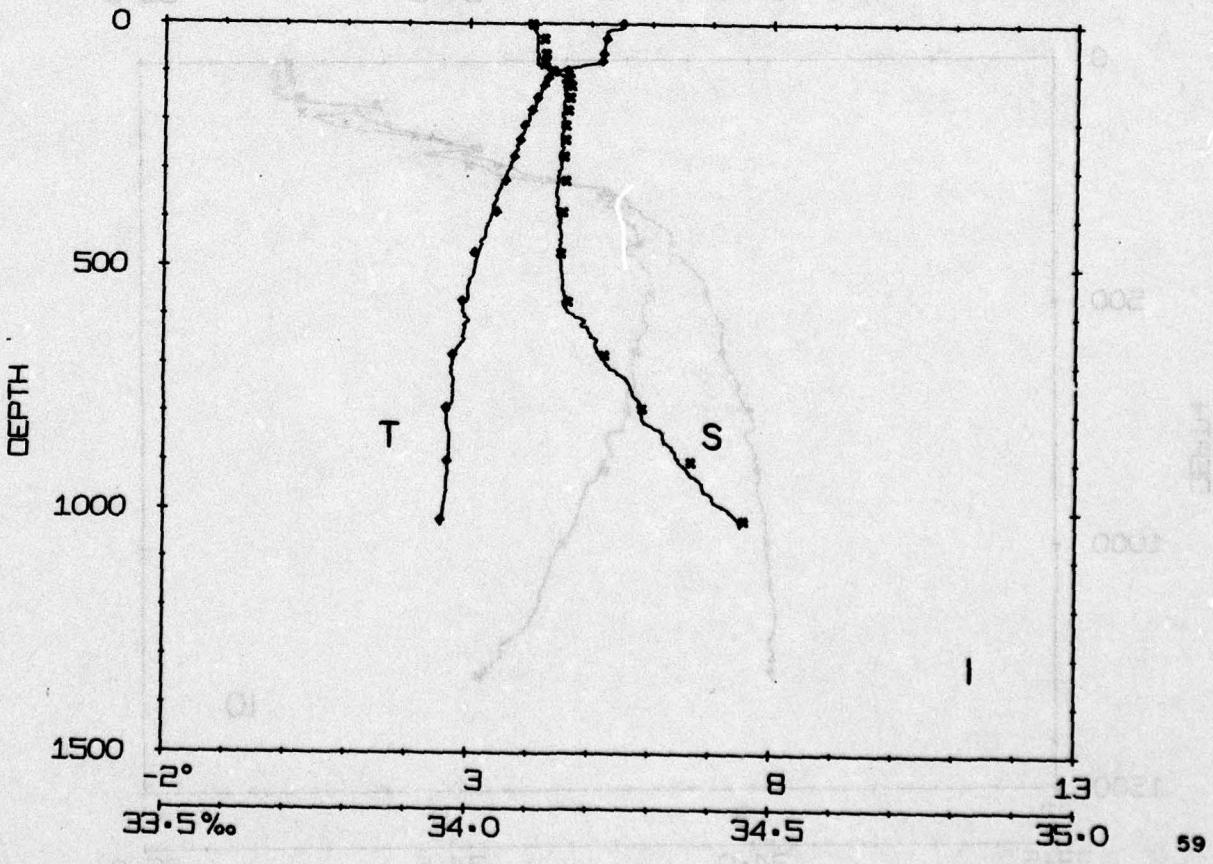
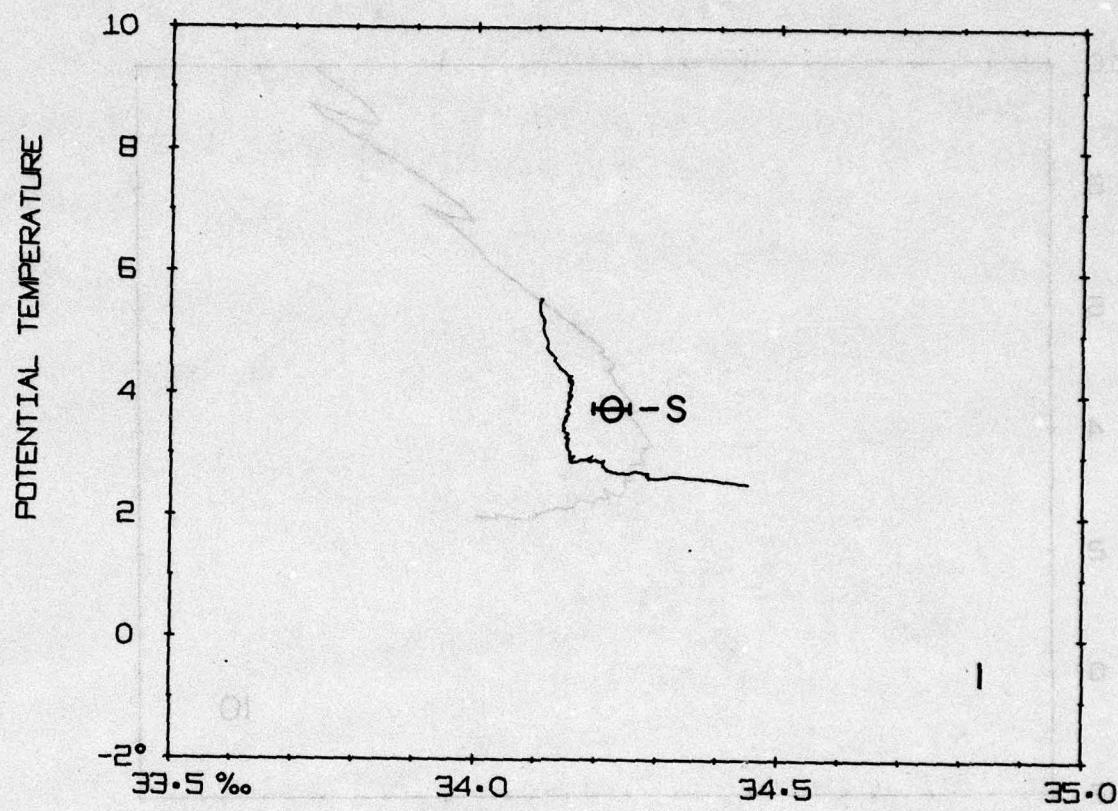
INDOMED LEG XIII CTD											
47			48			49			50		
LATITUDE 46 50.0S	LONGITUDE 53 43.0W	MU/DAY/YR 12/16/78	START TIME 1956 GMT	LATITUDE 48 48.0S	LONGITUDE 57 52.8W	MU/DAY/YR 12/18/78	START TIME 0413 GMT	LATITUDE 50 00.0S	LONGITUDE 59 52.0W	MU/DAY/YR 12/19/78	START TIME 0413 GMT
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	12.219	34.926	26.508	153.3	0.000	0	7.738	33.027	25.787	222.0	0.000
10	12.192	34.933	26.519	152.3	0.015	10	7.701	33.971	26.532	151.2	0.019
20	12.069	34.932	26.542	150.1	0.050	20	7.347	34.047	26.642	140.7	0.053
30	11.901	34.929	26.572	147.3	0.045	30	7.065	34.078	26.706	134.6	0.047
40	11.702	34.959	26.617	143.0	0.060	40	6.818	34.092	26.751	130.4	0.060
50	11.681	34.941	26.623	142.5	0.074	50	6.628	34.098	26.781	127.5	0.073
75	11.658	34.940	26.626	142.1	0.110	75	5.611	34.113	26.919	114.4	0.104
100	11.081	34.951	26.792	131.2	0.145	100	4.756	34.137	27.042	102.6	0.131
125	10.627	34.917	26.797	125.9	0.178	125	4.495	34.149	27.080	99.2	0.157
150	10.302	34.882	26.827	123.1	0.210	150	4.348	34.164	27.108	96.5	0.182
175	9.741	34.796	26.856	120.3	0.241	175	4.272	34.170	27.121	95.3	0.206
200	8.900	34.677	26.902	116.0	0.272	200	4.178	34.170	27.131	94.4	0.250
225	8.242	34.590	26.936	112.8	0.301	225	4.064	34.168	27.141	93.4	0.254
250	7.692	34.530	26.971	109.4	0.330	250	3.964	34.165	27.147	92.6	0.278
275	6.338	34.354	27.021	104.7	0.358	275	3.924	34.164	27.152	92.5	0.302
300	5.736	34.287	27.045	102.5	0.385	300	3.807	34.160	27.161	91.5	0.325
350	4.910	34.221	27.091	98.1	0.437	350	3.674	34.155	27.170	90.6	0.372
400	4.506	34.201	27.120	95.4	0.487	400	3.554	34.153	27.180	89.7	0.419
450	4.166	34.184	27.143	93.2	0.536	450	3.306	34.143	27.196	88.2	0.465
500	3.989	34.184	27.161	91.4	0.585	500	3.127	34.144	27.213	86.5	0.510
550	3.838	34.185	27.177	89.9	0.632	550	3.051	34.161	27.234	84.6	0.554
600	3.654	34.185	27.196	88.2	0.679	600	3.009	34.180	27.253	82.6	0.598
650	3.436	34.182	27.215	86.4	0.725	650	2.990	34.195	27.267	81.5	0.641
700	3.270	34.190	27.237	84.3	0.770	700	2.957	34.214	27.285	79.8	0.684
750	3.051	34.199	27.264	81.7	0.814	714	2.949	34.221	27.291	79.2	0.695
800	2.958	34.219	27.289	79.4	0.857						
850	2.849	34.239	27.314	76.9	0.899						
900	2.732	34.253	27.336	74.9	0.939						
950	2.787	34.289	27.359	72.6	0.979						
1000	2.786	34.326	27.389	69.8	1.017						
1100	2.778	34.374	27.428	66.1	1.092						
1200	2.727	34.423	27.472	62.0	1.163						
1300	2.703	34.481	27.520	57.4	1.230						
1400	2.666	34.522	27.556	54.0	1.294						
1500	2.708	34.565	27.586	51.1	1.355						
1600	2.710	34.618	27.629	47.1	1.414						
1700	2.690	34.649	27.655	44.6	1.470						
1800	2.595	34.670	27.680	42.3	1.524						
1900	2.714	34.719	27.709	39.6	1.576						
2000	2.652	34.730	27.723	38.2	1.627						
2100	2.654	34.760	27.747	36.0	1.676						
2200	2.468	34.748	27.753	35.3	1.725						
2300	2.458	34.764	27.767	34.0	1.772						
2400	2.466	34.782	27.780	32.8	1.819						
2500	2.400	34.785	27.788	32.0	1.865						
2600	2.209	34.765	27.788	32.0	1.910						
2700	2.153	34.770	27.797	31.2	1.955						
2800	2.057	34.771	27.805	30.4	1.999						
2900	1.990	34.769	27.809	30.0	2.042						
3000	1.856	34.758	27.811	29.9	2.084						
3100	1.708	34.746	27.813	29.7	2.126						
3200	1.591	34.742	27.818	29.2	2.167						
3300	1.496	34.736	27.820	29.0	2.207						
3400	1.402	34.731	27.823	28.7	2.246						
3500	1.307	34.727	27.827	28.4	2.285						
3563	1.250	34.725	27.829	28.2	2.308						

RV MELVILLE										INCOMED LEG XIII									
LATITUDE 49 24.9S		LONGITUDE 59 05.6W		MO/DAY/YR 12/18/78		MESSENGER TIME 1241 GMI		BOTTOM 388M		WINDU 320		SPEED 16KT		WEATHER 0		DOMINANT WAVES 320 S 5			
Z	T	S	U2	P04	S103	H02	N03	UT	C	I	S	U2	SIGT	UT	UU				
0	9.54	33.825	6.97	0.79	1.	0.16	9.9	189.0	0	9.54	33.825	6.97	26.133	189.0	0.000				
20	5.51	33.828	7.05	0.68	1.	0.16	10.4	173.3	10	8.91	33.826	7.01	26.233	179.5	0.018				
41	4.39	33.837	6.88	0.64	1.	0.16	10.6	170.9	20	8.51	33.828	7.05	26.299	173.3	0.036				
62	0.57	33.888	7.05	1.00	3.	0.17	14.1	142.5	30	8.45	33.834	6.96	26.311	172.1	0.055				
77	5.49	33.933	6.88	1.48	6.	0.19	18.8	126.2	50	7.69	33.854	6.96	26.440	159.9	0.087				
103	5.17	33.999	6.85	1.55	6.	0.15	20.5	117.6	75	5.61	33.928	6.91	26.776	128.0	0.125				
123	5.01	34.034	6.83	1.58	7.	0.12	21.5	113.2	100	5.21	34.002	6.85	26.882	117.9	0.154				
144	4.88	34.051	6.78	1.68	9.	0.11	22.5	110.6	125	5.00	34.037	6.63	26.935	112.9	0.183				
173	4.77	34.068	6.78	1.65	9.	0.11	23.0	108.1	150	4.85	34.056	6.78	26.965	110.0	0.211				
204	4.65	34.095	6.79	1.67	10.	0.08	23.6	104.4	200	4.66	34.093	6.79	27.016	105.2	0.266				
244	4.55	34.115	6.87	1.66	10.	0.06	23.7	102.3	250	4.52	34.119	6.87	27.052	101.8	0.319				
275	4.42	34.128	6.87	1.67	10.	0.06	24.1	100.0	300	4.56	34.159	6.70	27.085	98.6	0.370				
326	4.34	34.146	6.51	1.85	14.	0.17	25.2	97.8											
372	4.35	34.147	6.50	1.88	14.	0.17	25.3	97.8											

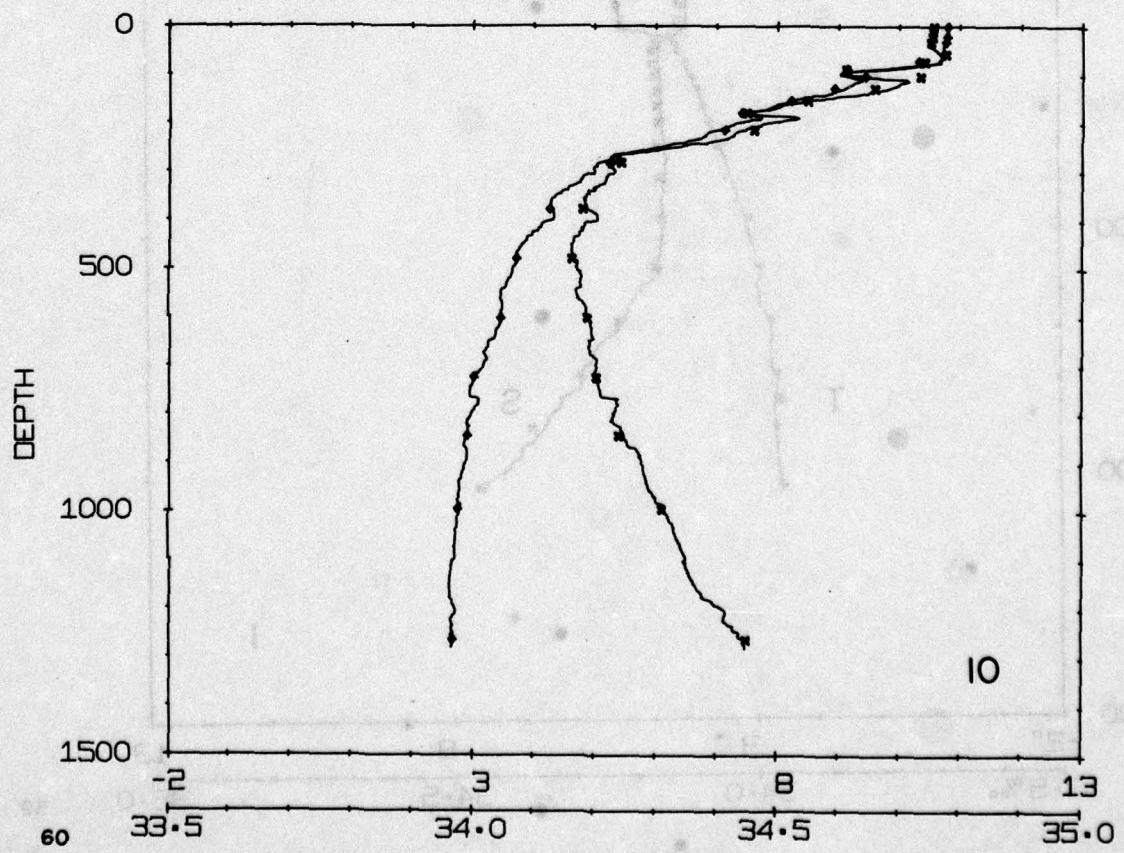
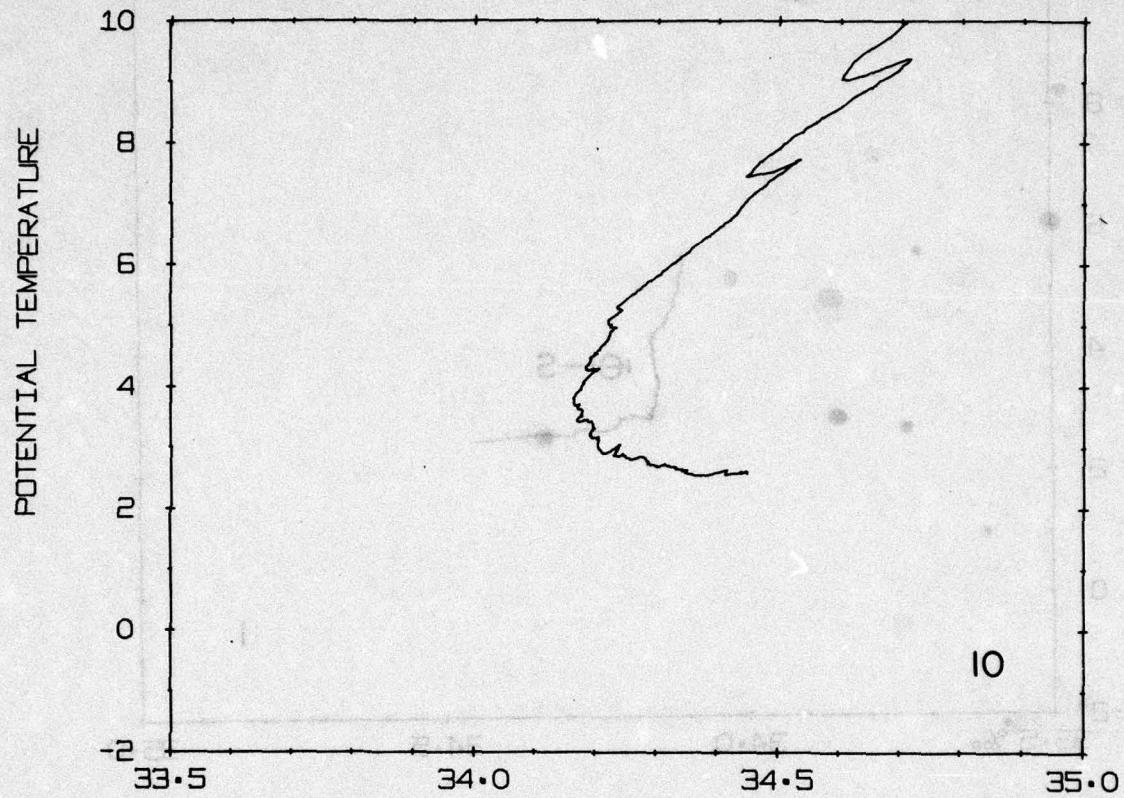
RV MELVILLE										INCOMED LEG XIII									
LATITUDE 49 56. S		LONGITUDE 60 08. W		MO/DAY/YR 12/18/78		MESSENGER TIME 1921 GMI		BOTTOM 164M		WINDU 310		SPEED 15KT		WEATHER 0		DOMINANT WAVES 330 S 5			
Z	T	S	U2	P04	S103	H02	N03	UT	C	I	S	U2	SIGT	UT	UU				
1	10.55	33.765	7.98	0.57	0.	0.14	4.7	209.7	0	10.55	33.765	7.98	25.915	209.7	0.000				
11	9.81	33.750	7.75	0.63	0.	0.12	5.8	198.8	10	9.88	33.753	7.77	26.019	199.9	0.020				
32	8.46	33.745	7.18	0.69	1.	0.07	6.2	178.7	20	9.16	33.746	7.41	26.132	189.2	0.040				
42	8.12	33.746	7.50	1.02	1.	0.16	12.1	173.7	30	8.56	33.746	7.20	26.226	180.2	0.058				
57	6.77	33.749	7.39	1.24	3.	0.21	14.6	155.4	50	7.45	33.749	7.44	26.389	164.7	0.093				
72	5.63	33.800	6.46	1.58	6.	0.11	20.4	138.0	75	5.62	33.806	6.45	26.679	157.2	0.131				
88	5.48	33.825	6.41	1.61	8.	0.09	21.6	134.1	100	5.47	33.828	6.39	26.714	133.9	0.165				
109	5.46	33.827	6.38	1.69	7.	0.09	21.7	133.8	125	5.40	33.829	6.25	26.723	133.0	0.199				
124	5.41	33.828	6.26	1.71	6.	0.12	20.9	133.1	150	5.16	33.835	6.15	26.757	129.8	0.232				
145	5.20	33.834	6.17	1.82	6.	0.11	20.8	130.3											

INCOMED LEG XIII CTD										50									
LATITUDE 49 24.9S		LONGITUDE 59 25.6W		MO/DAY/YR 12/18/78		START TIME 1218 GMT		LATITUDE 49 56. S		LONGITUDE 60 48. W		MO/DAY/YR 12/18/78		START TIME 1307 GMT					
Z	T	S	SIGMA T	DT	DL	Z	T	S	SIGMA T	LT	DL	Z	T	S	SIGMA T	LT	DL		
0	9.528	33.821	26.132	189.1	0.000	0	10.497	33.760	25.922	209.0	0.000	0	9.577	33.740	26.061	175.9	0.020		
10	9.511	33.822	26.135	188.6	0.019	10	9.577	33.740	26.061	175.9	0.020	20	8.718	33.744	26.203	162.4	0.059		
26	8.592	33.838	26.294	173.7	0.037	30	8.450	33.743	26.242	174.7	0.057	40	8.271	33.741	26.275	174.6	0.075		
30	8.405	33.836	26.321	171.1	0.034	40	8.271	33.741	26.275	174.6	0.075	50	7.148	33.733	26.367	166.7	0.192		
40	8.391	33.841	26.327	170.6	0.071	75	5.562	33.808	26.676	136.6	0.150	100	5.473	33.827	26.714	135.9	0.164		
50	7.360	33.843	26.334	170.0	0.169	125	5.351	33.828	26.724	132.9	0.198	125	5.214	33.836	26.751	130.3	0.263		
75	5.572	33.926	26.780	127.6	0.126	144	4.819	33.843	27.006	106.1	0.270								
100	5.191	33.988	26.874	116.7	0.157														
125	5.041	34.134	26.928	115.6	0.186														
150	4.886	34.053	26.961	110.5	0.215														
175	4.809	34.170	26.983	104.4	0.243														
200	4.719	34.067	27.006	106.1	0.270														
225	4.640	34.101	27.026	104.3	0.297														
250	4.555	34.116	27.047	102.0	0.325														
275	4.437	34.128	27.070	100.1	0.349														
300	4.358	34.146	27.091	98.1	0.375														
325	4.340	34.149	27.096	97.7	0.425														
372	4.351	34.150	27.096	97.6	0.447														

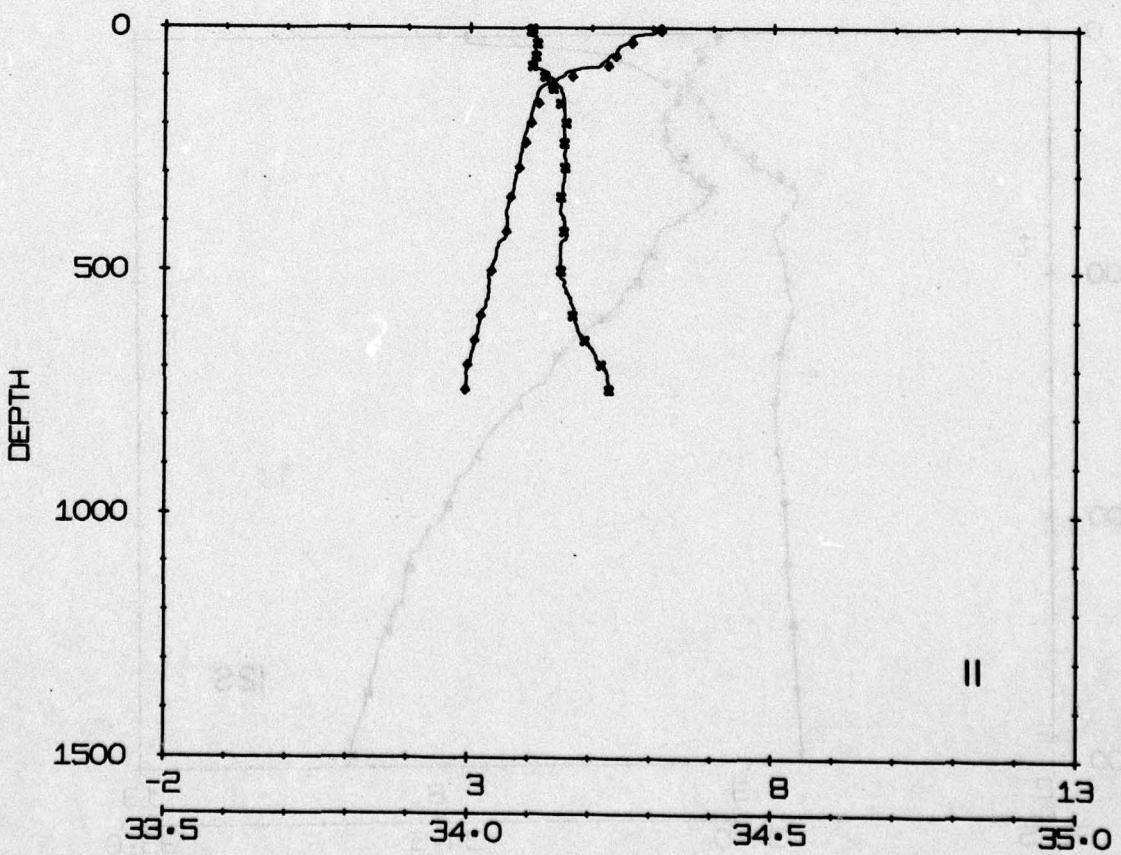
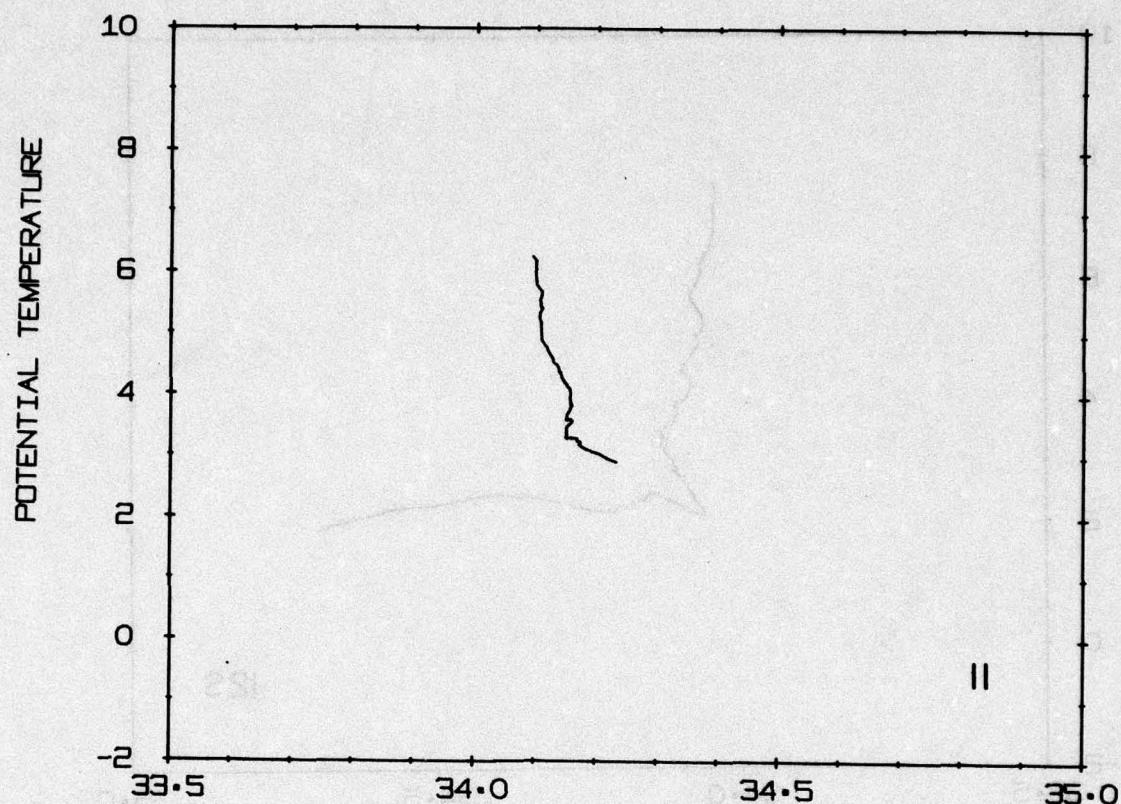
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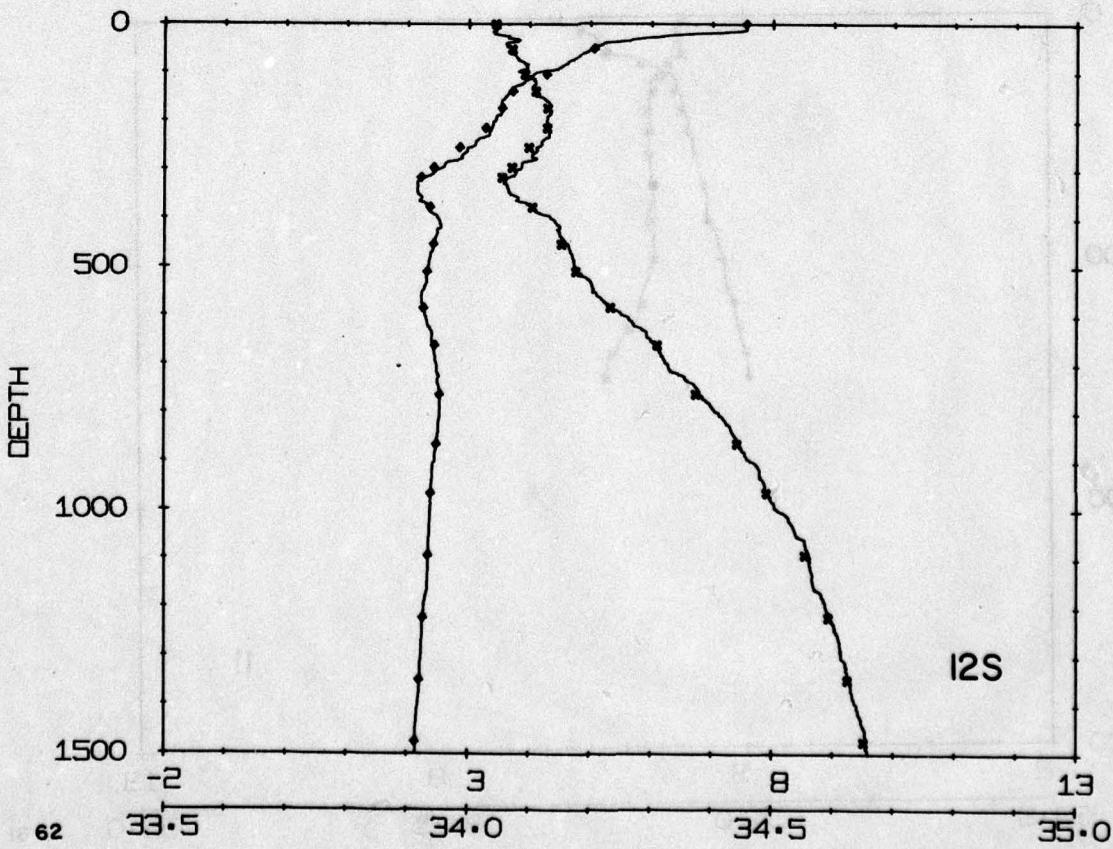
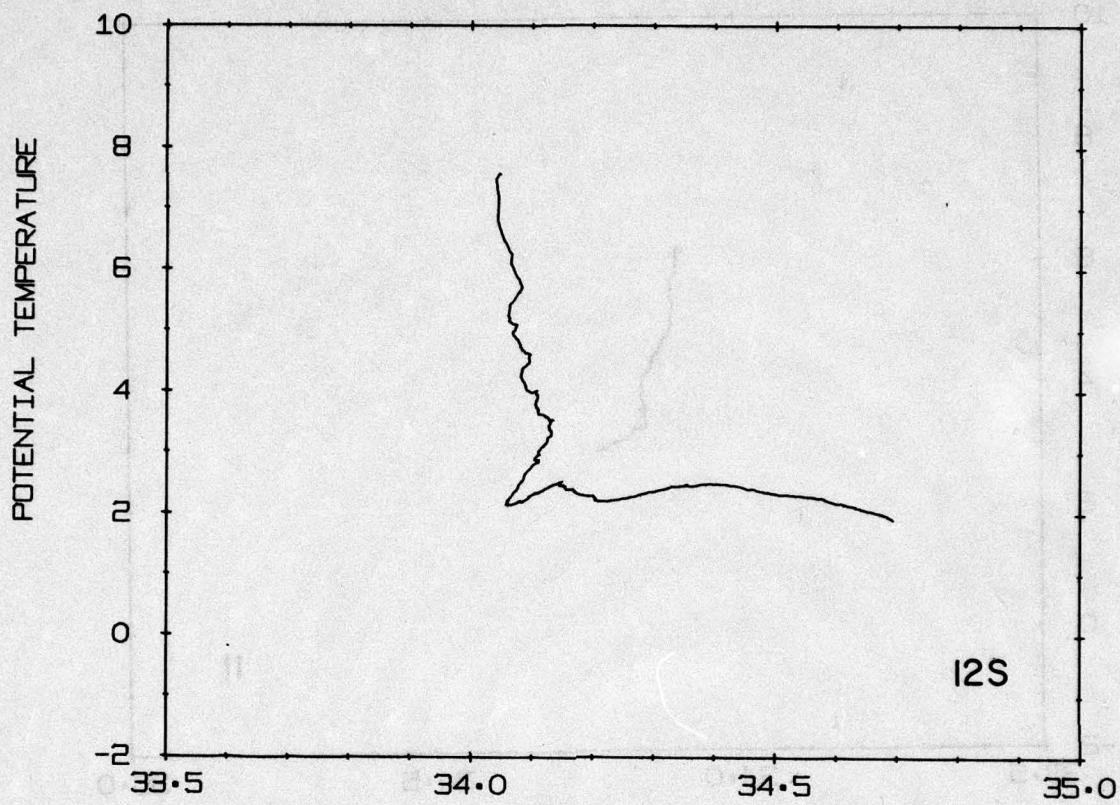
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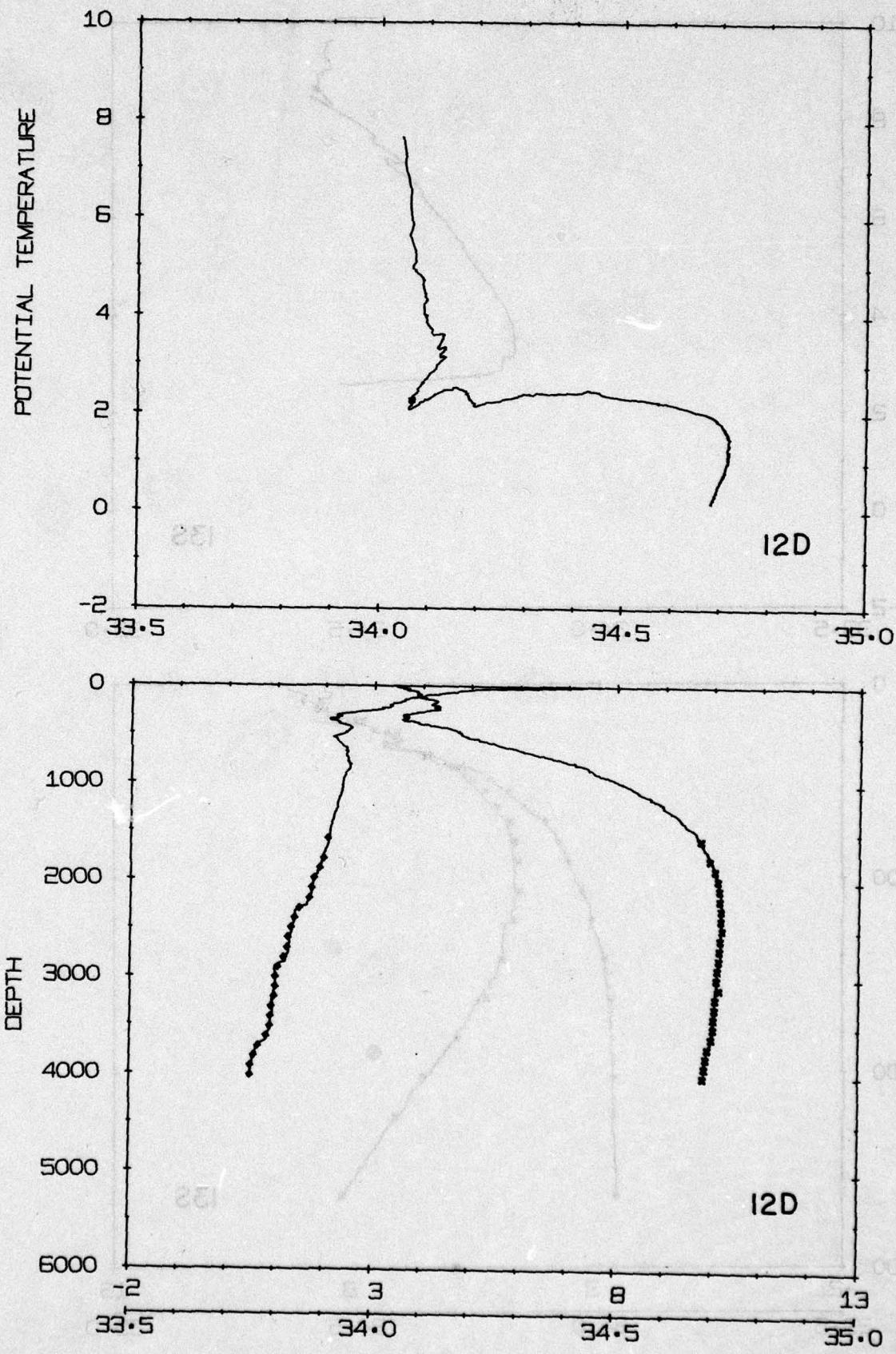
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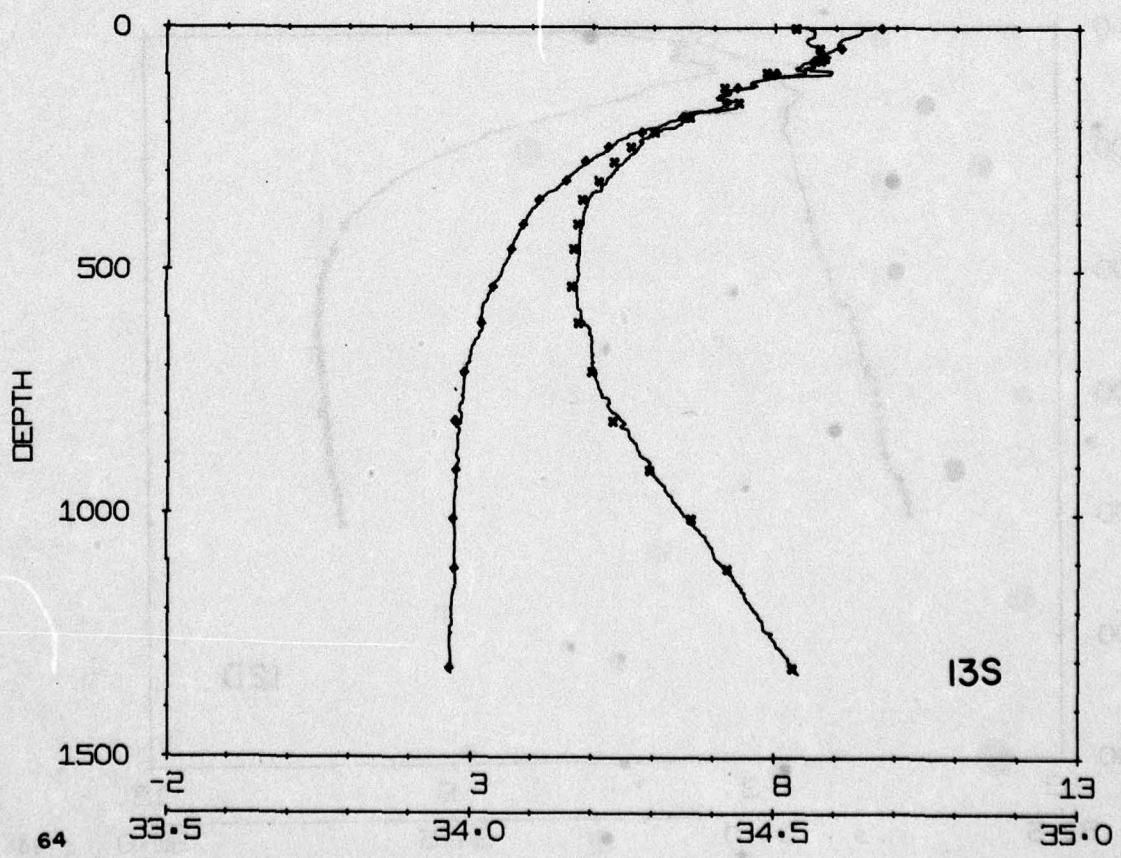
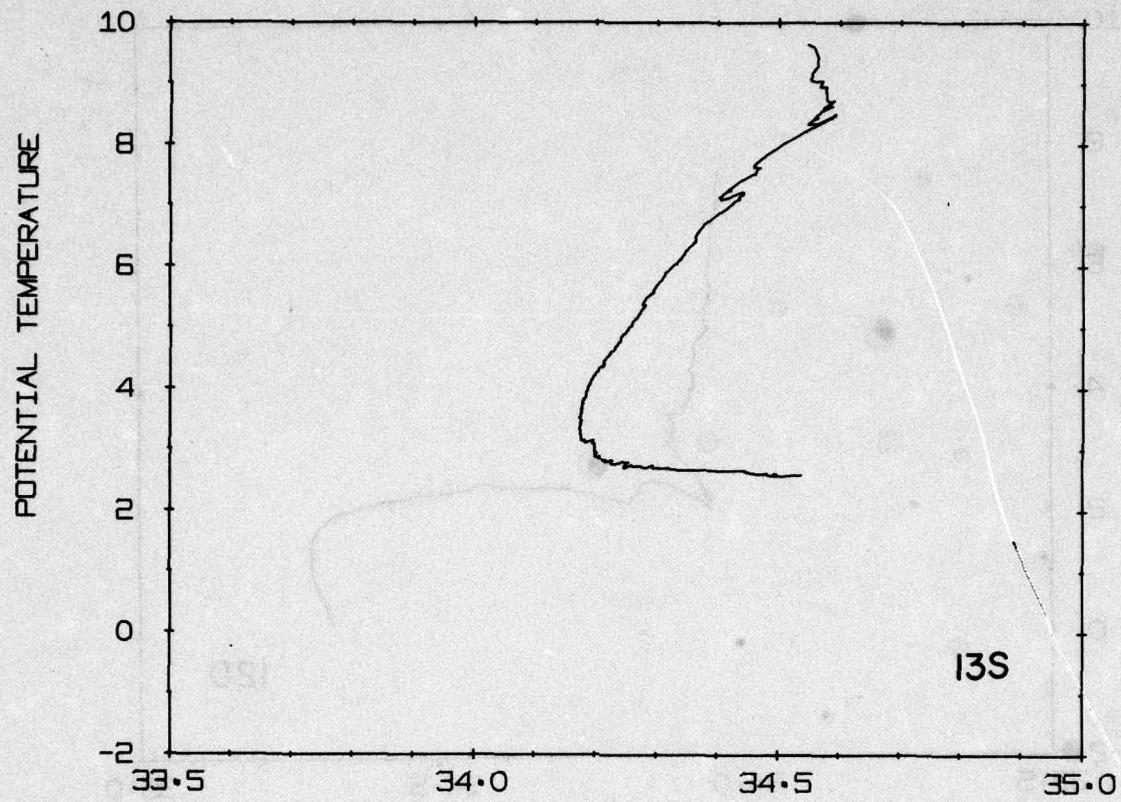
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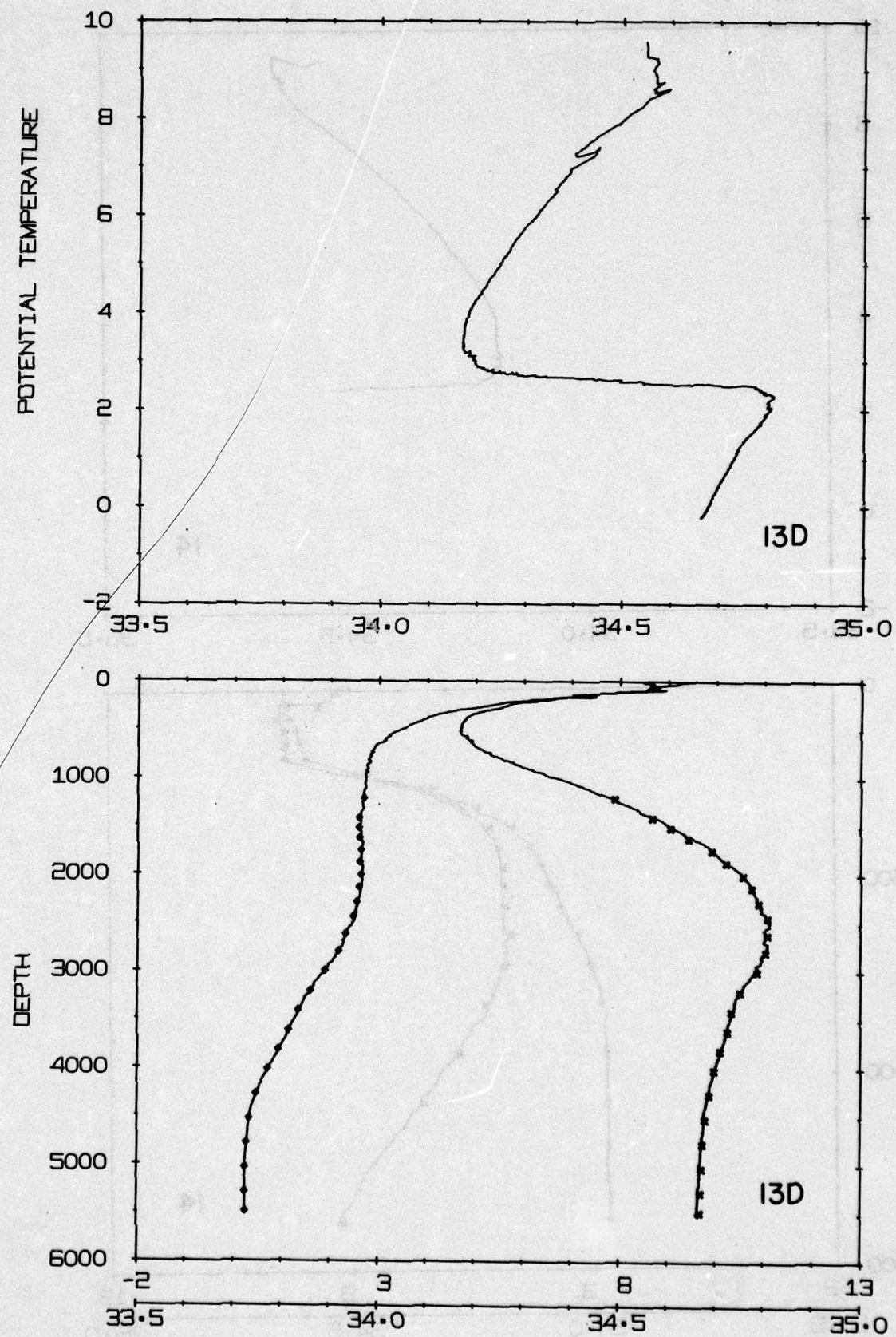
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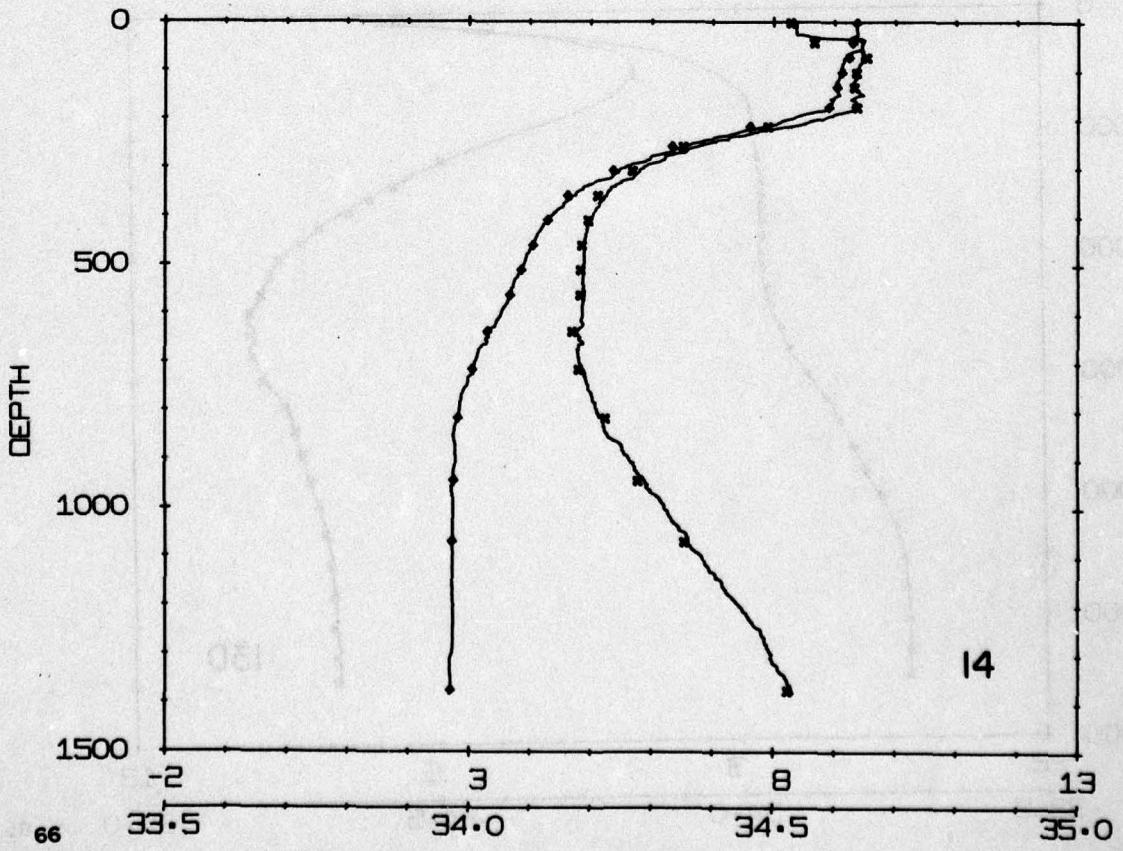
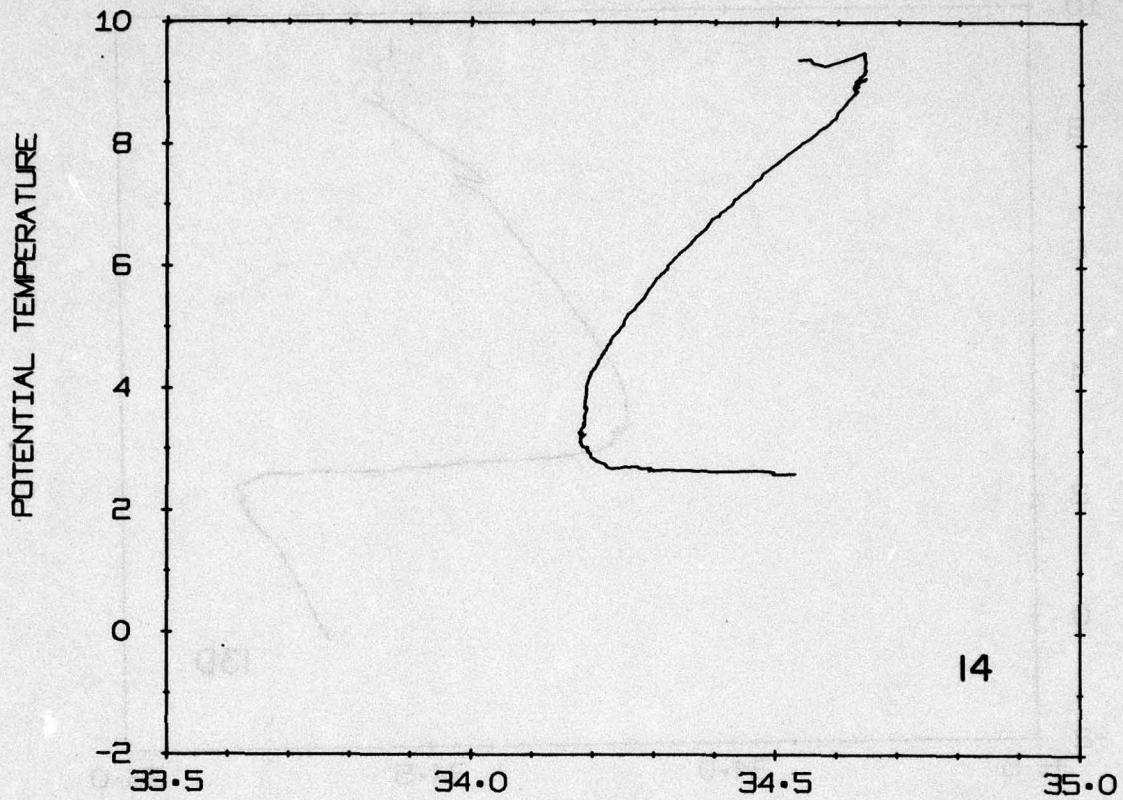


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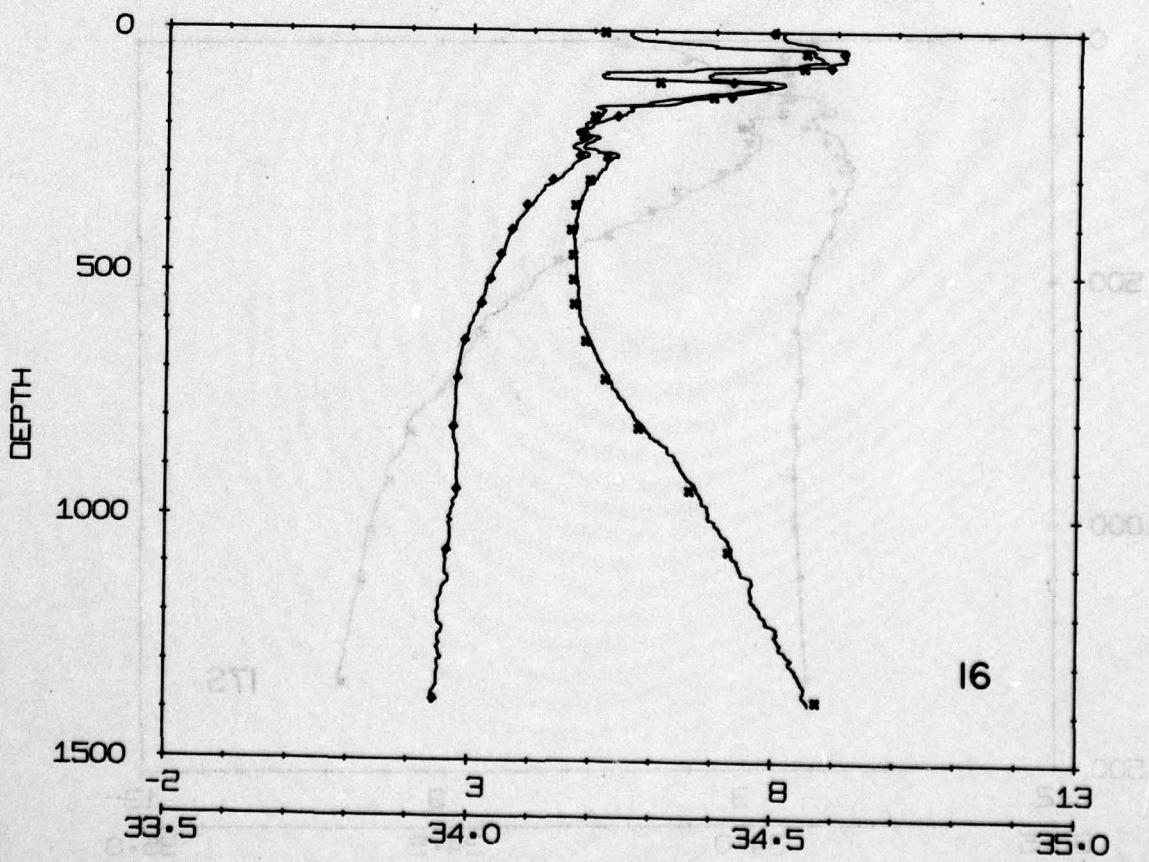
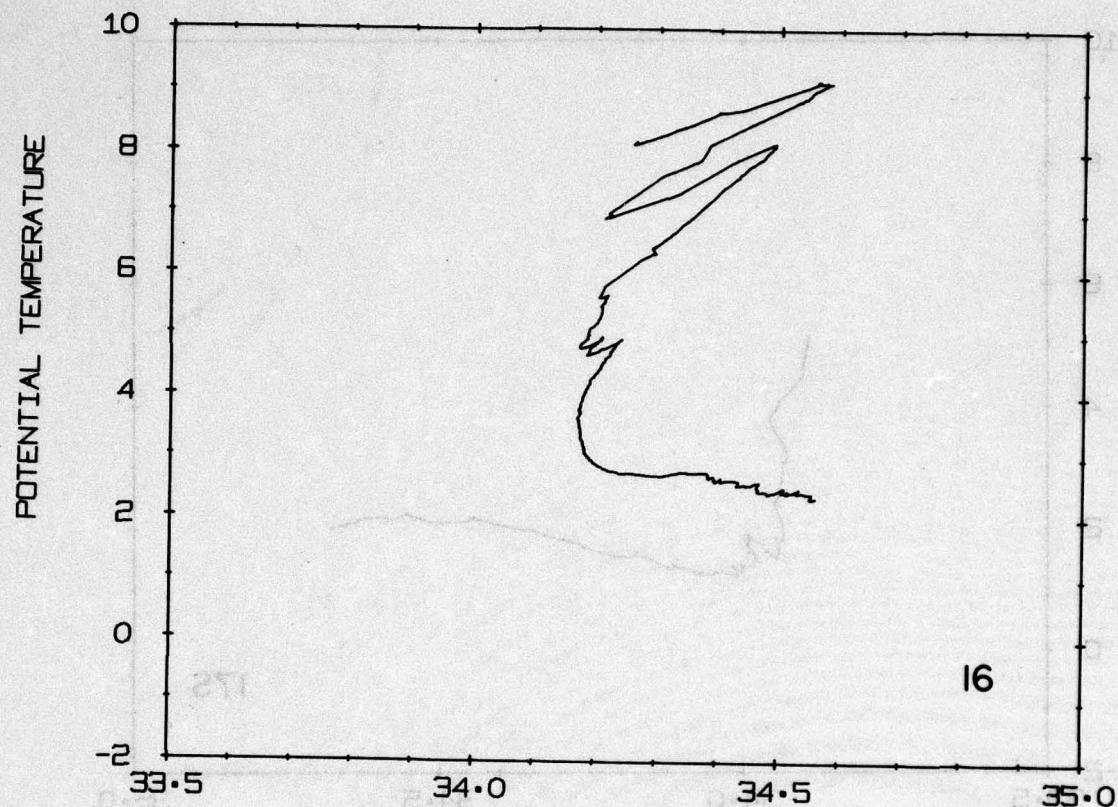
DEPTH

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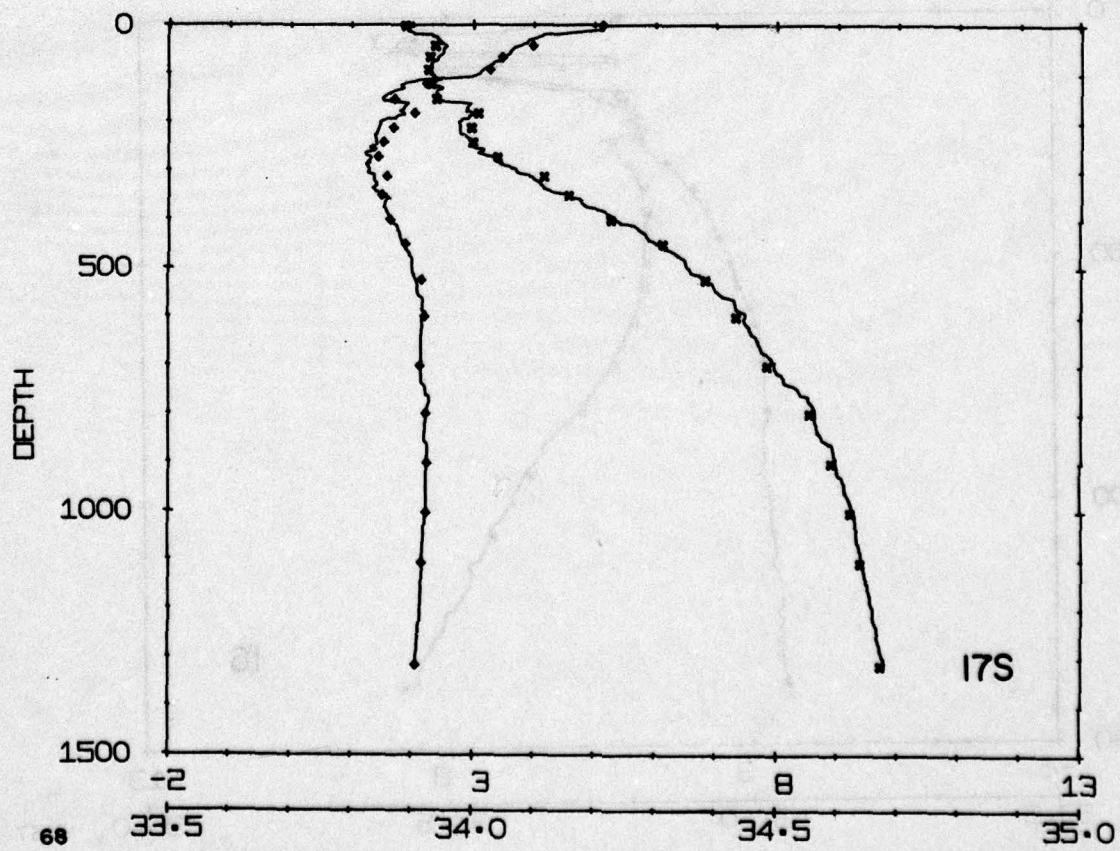
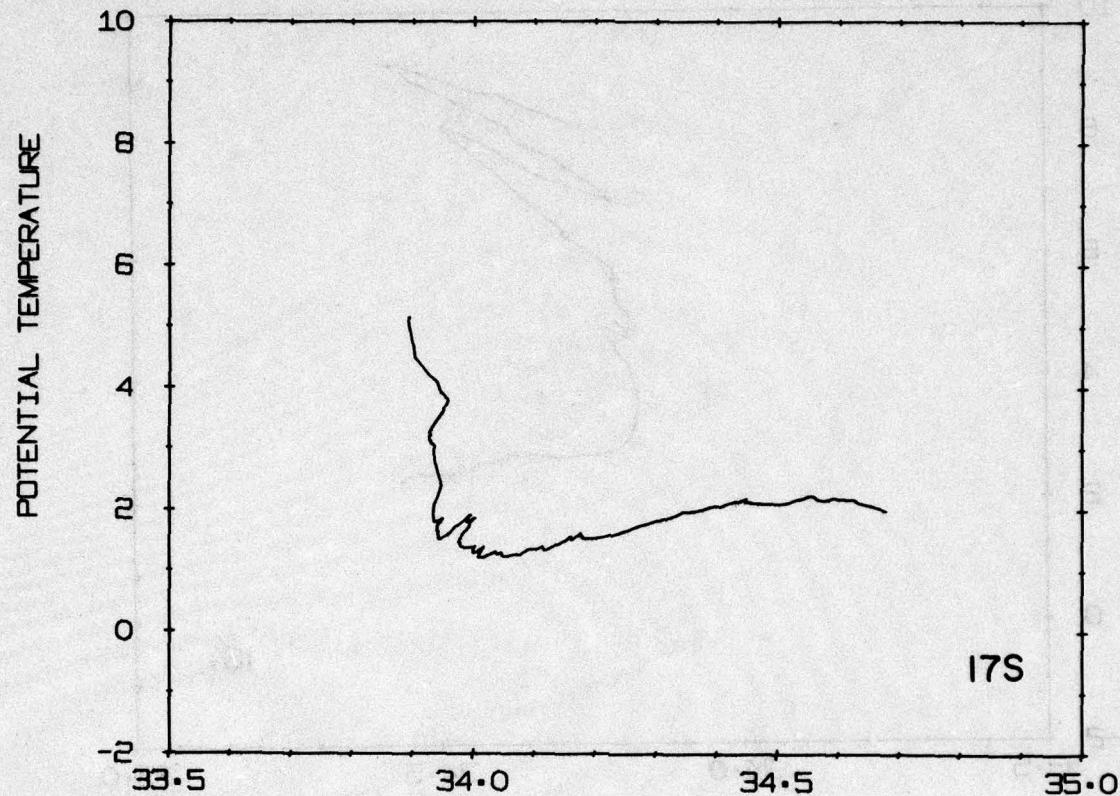
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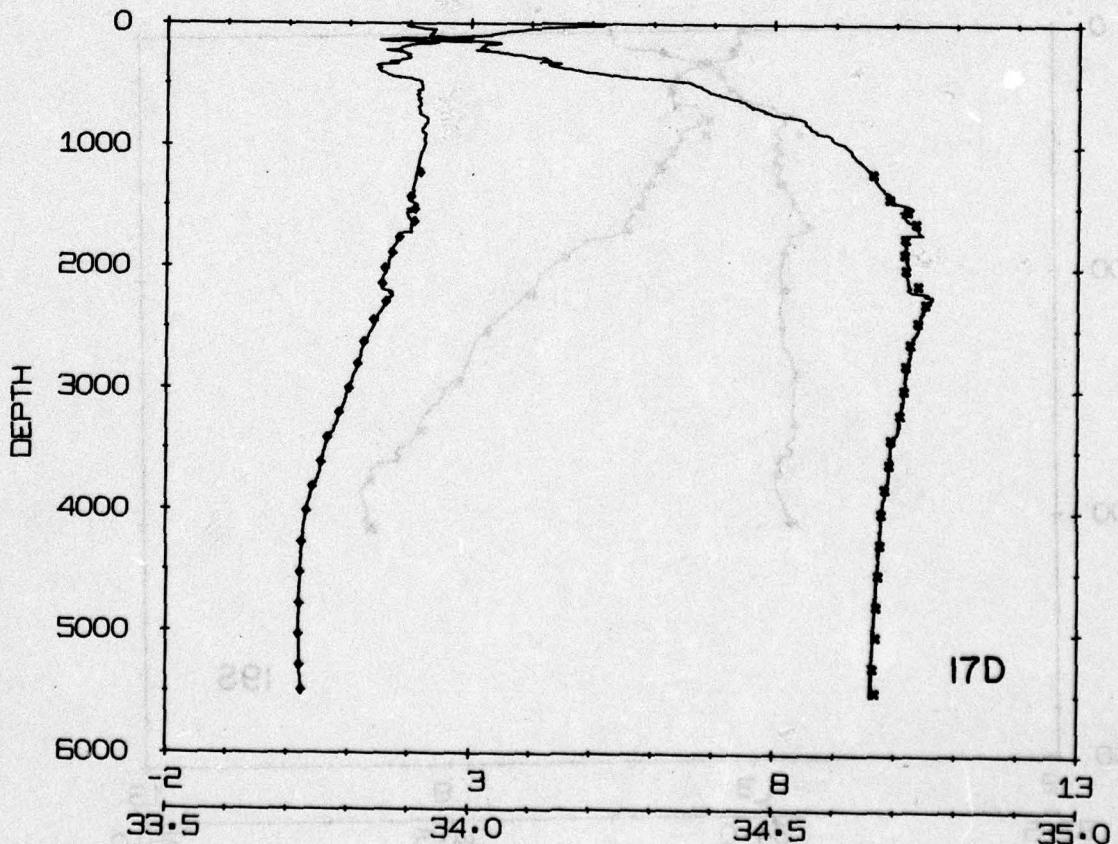
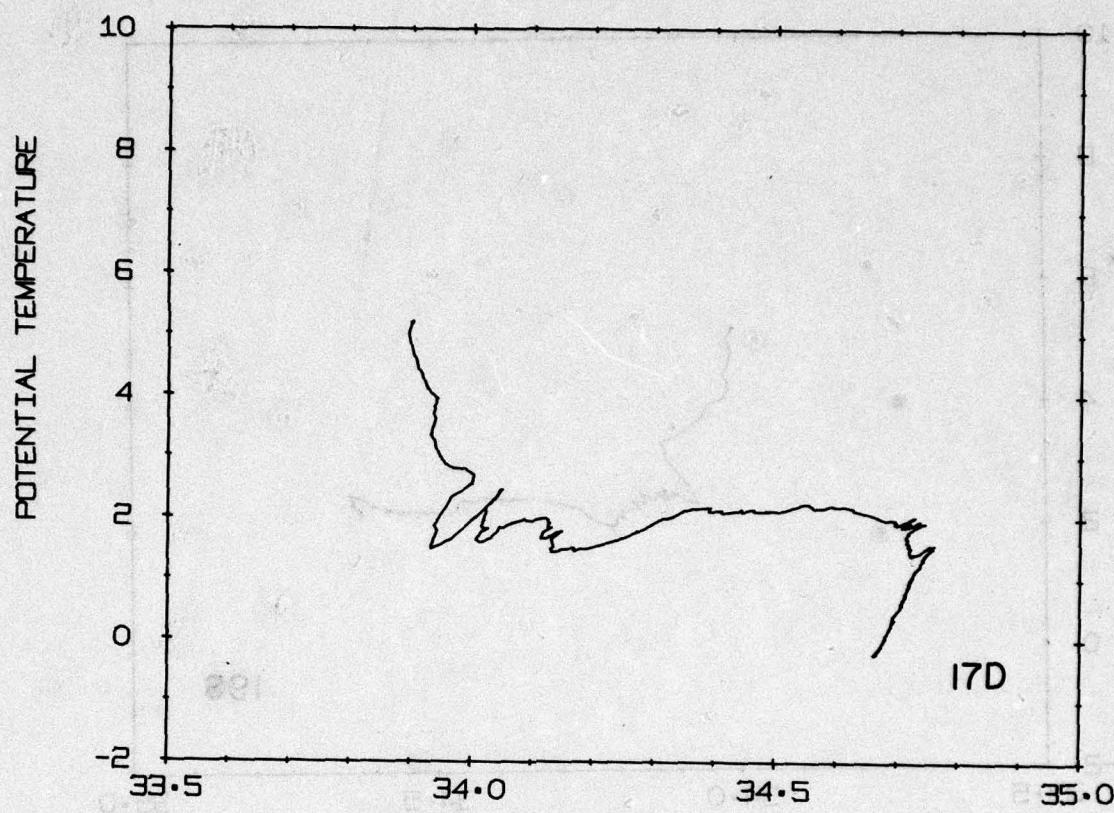
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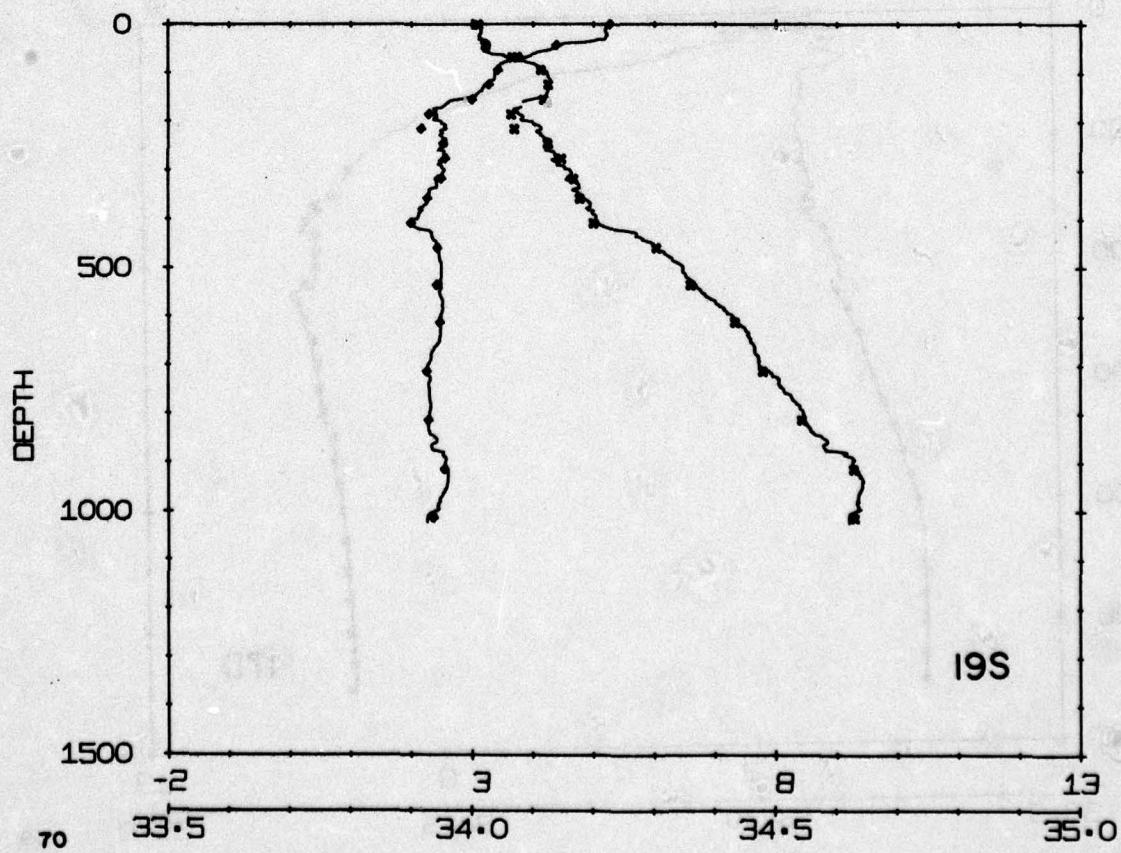
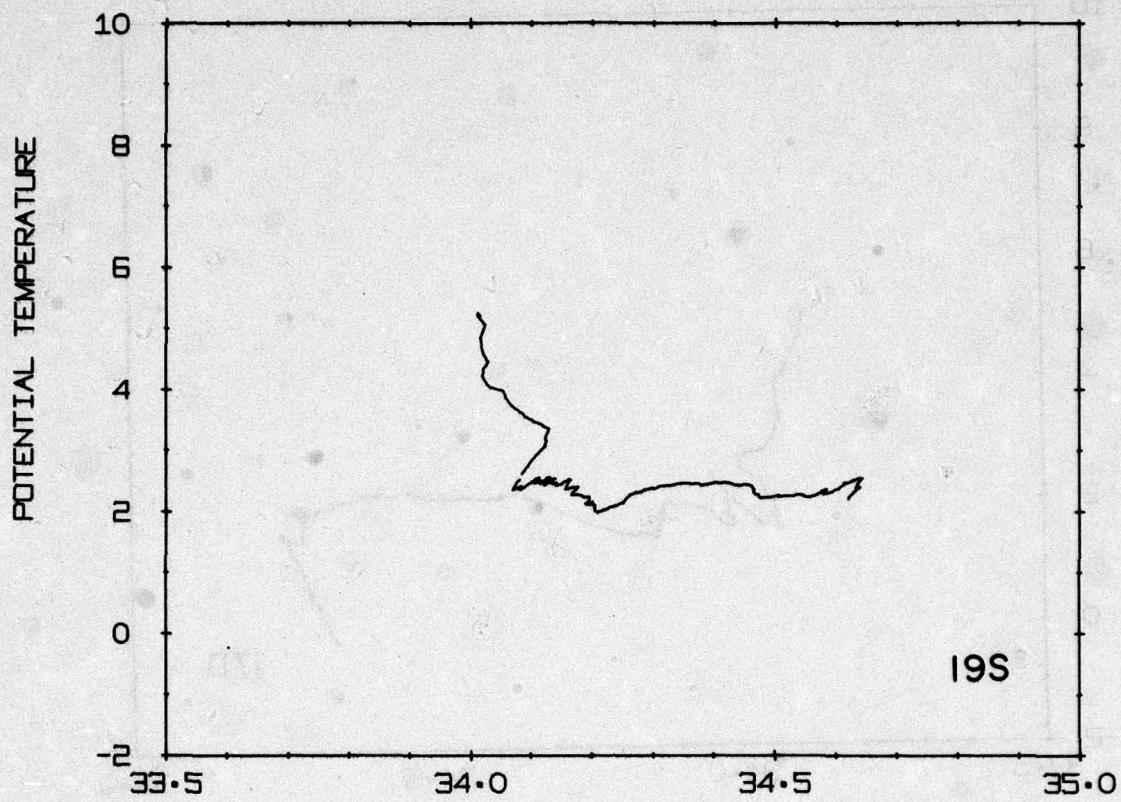
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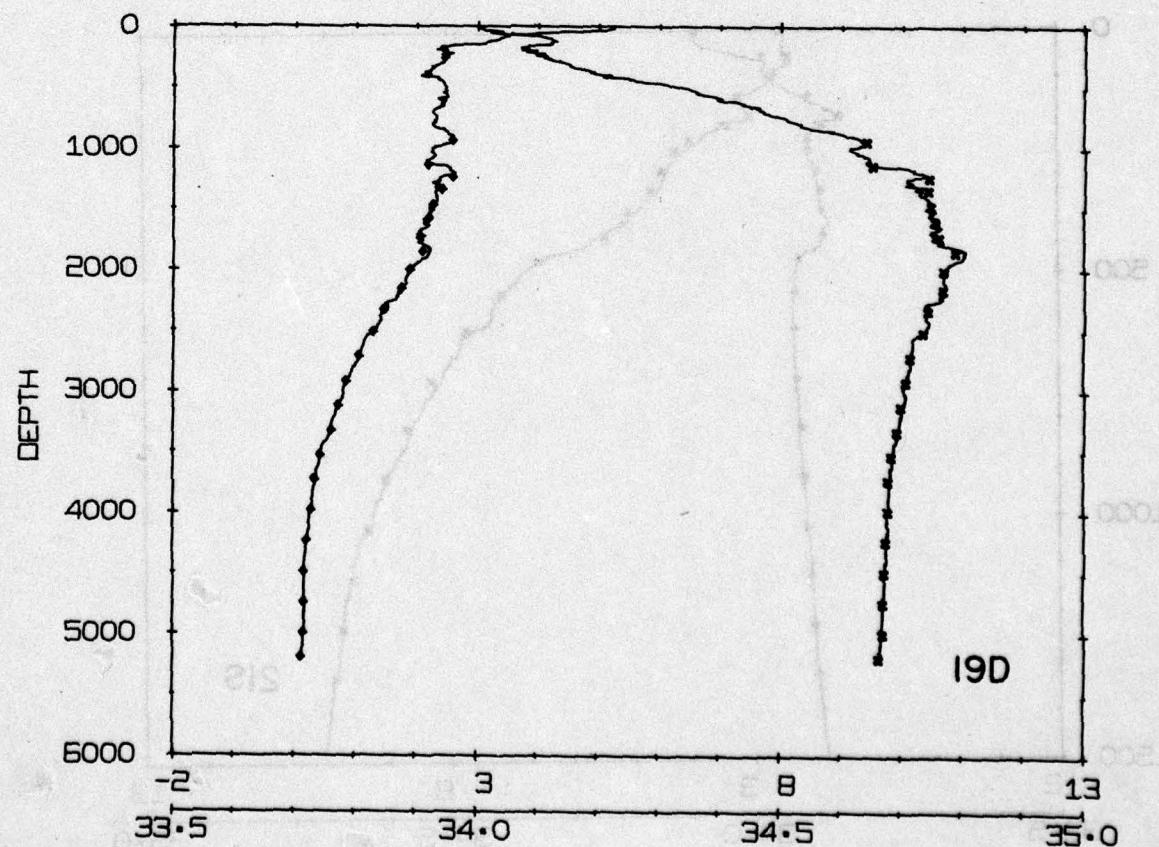
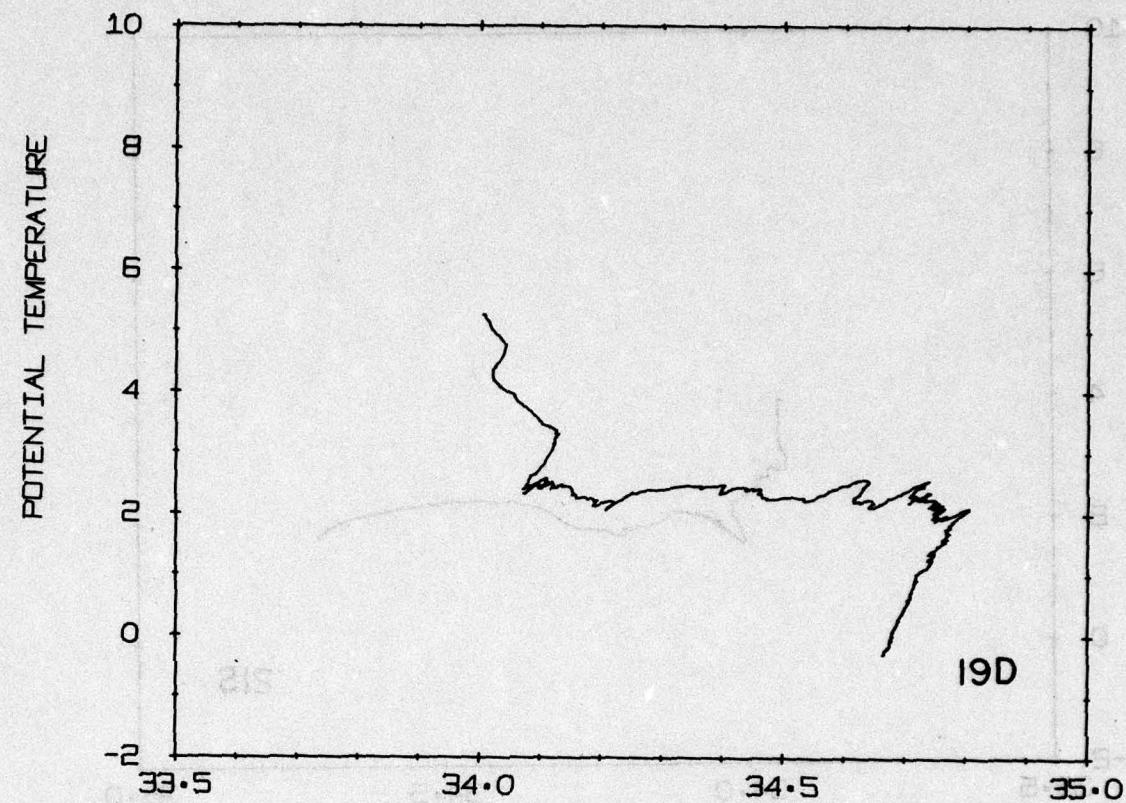
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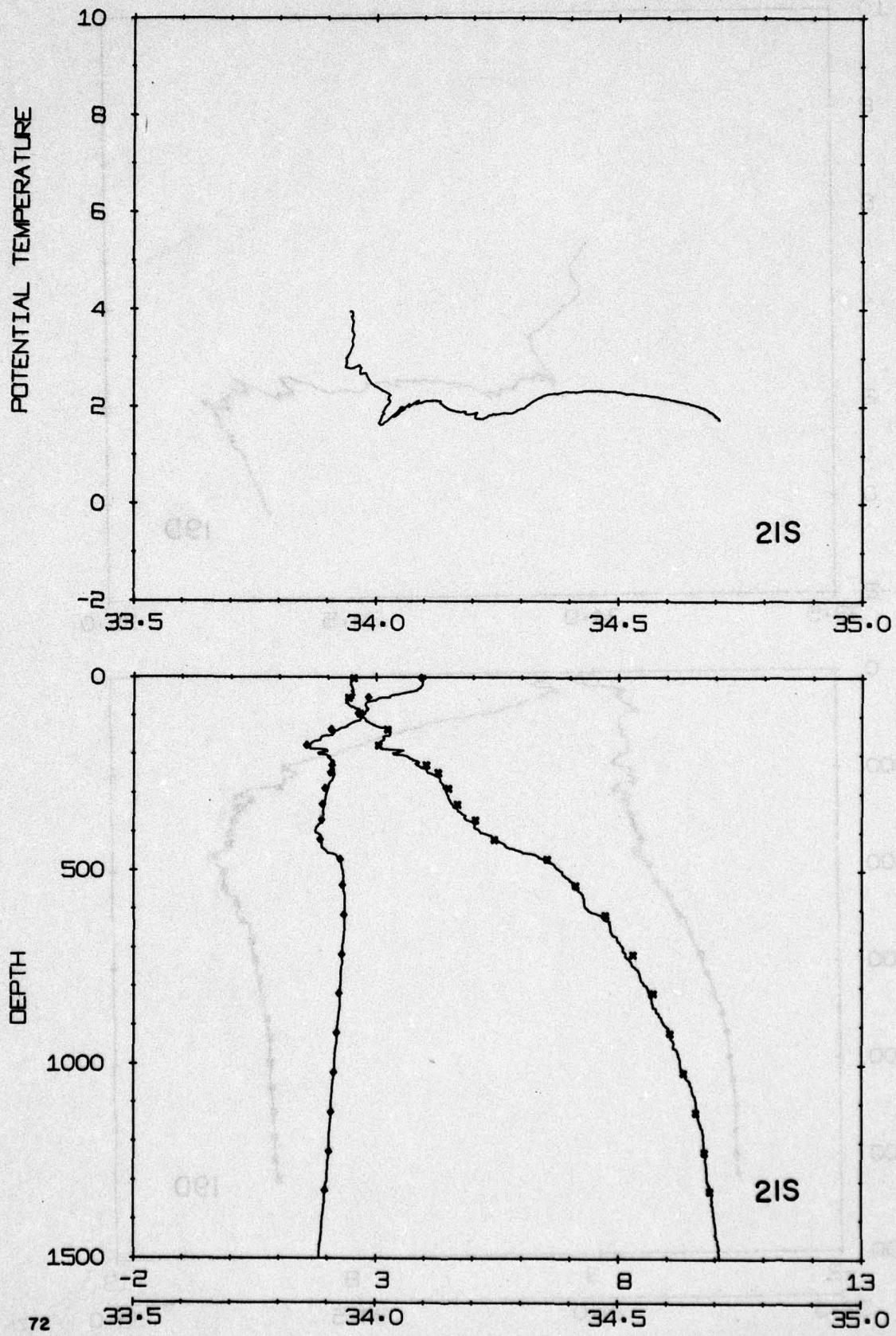
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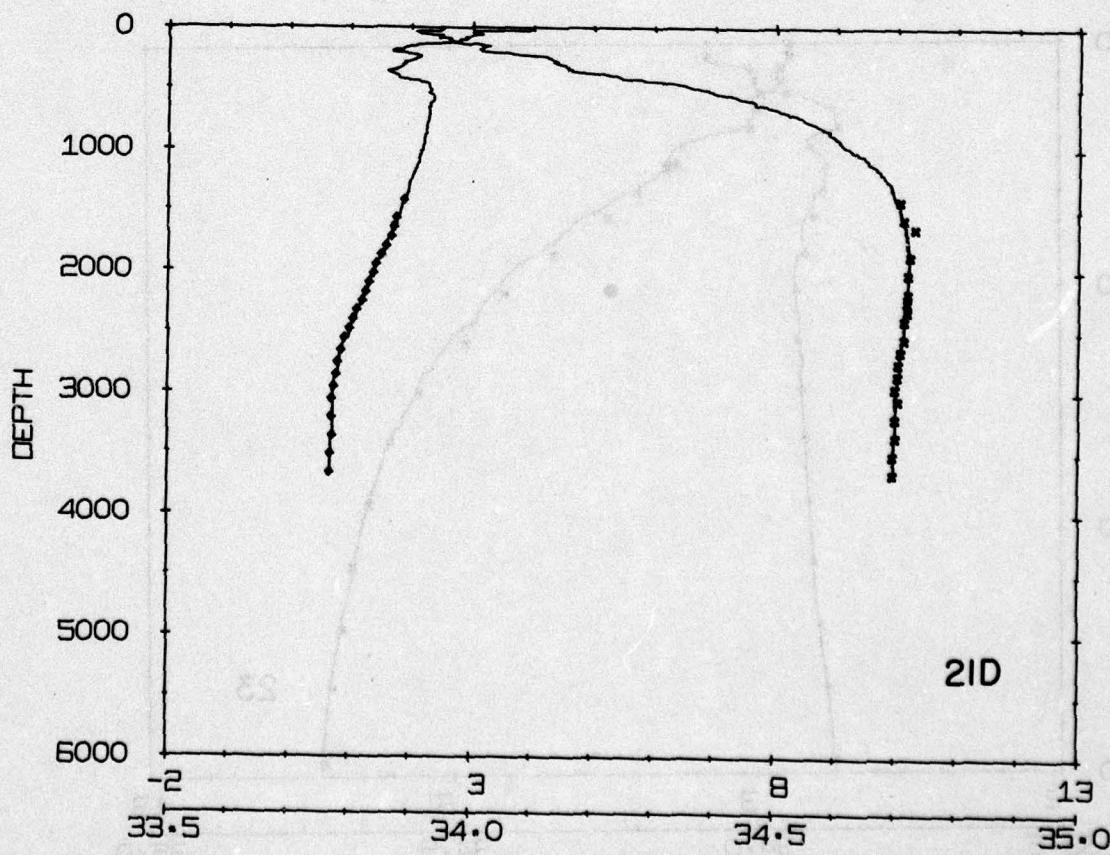
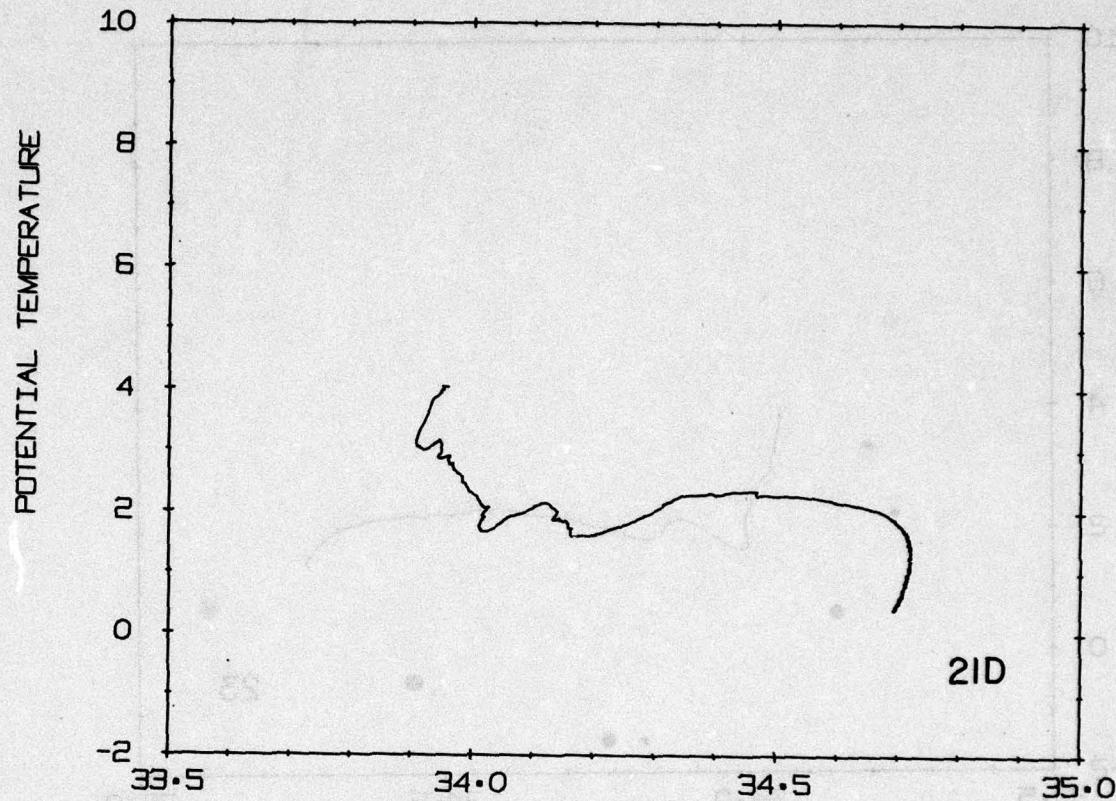
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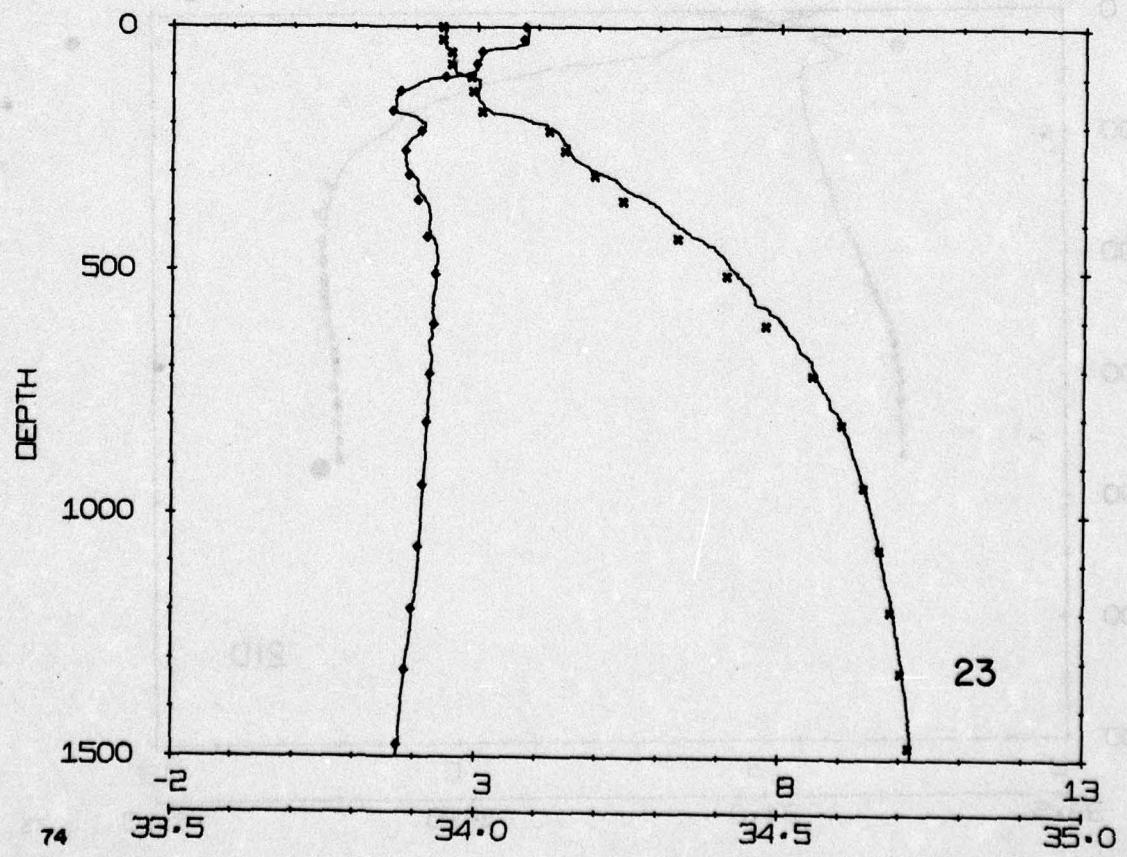
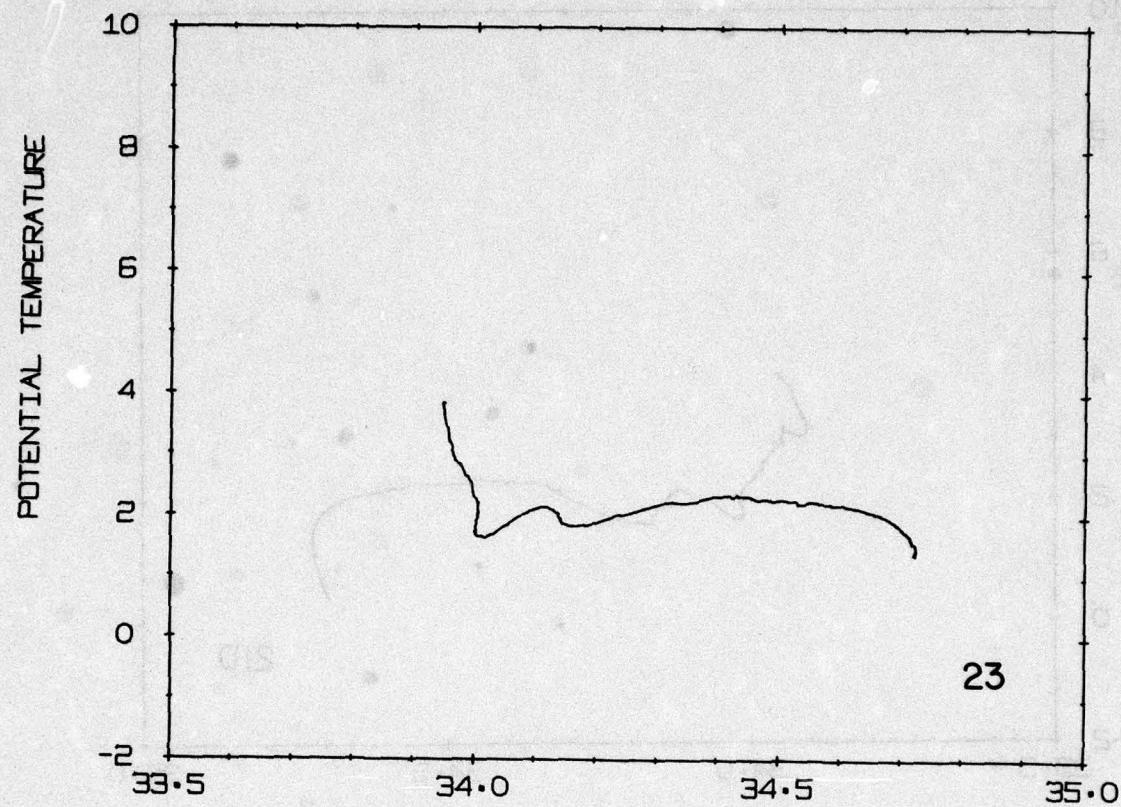
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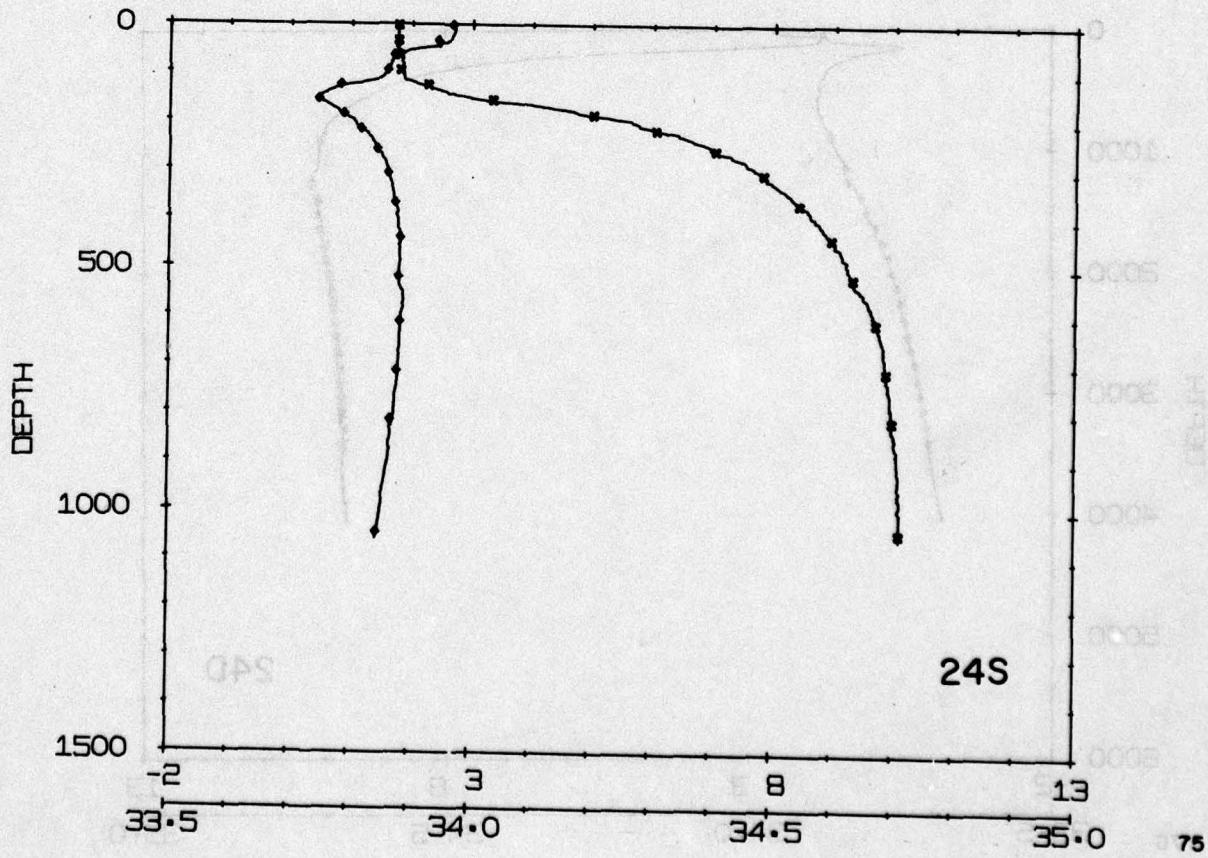
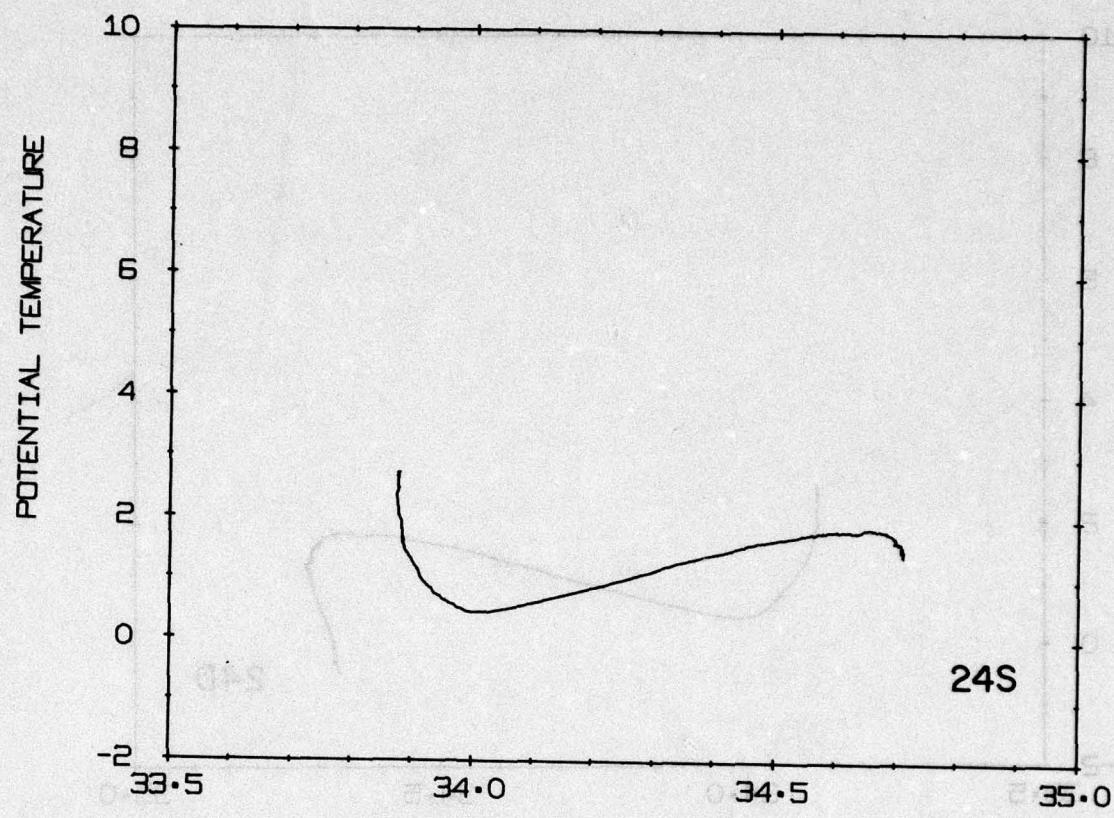
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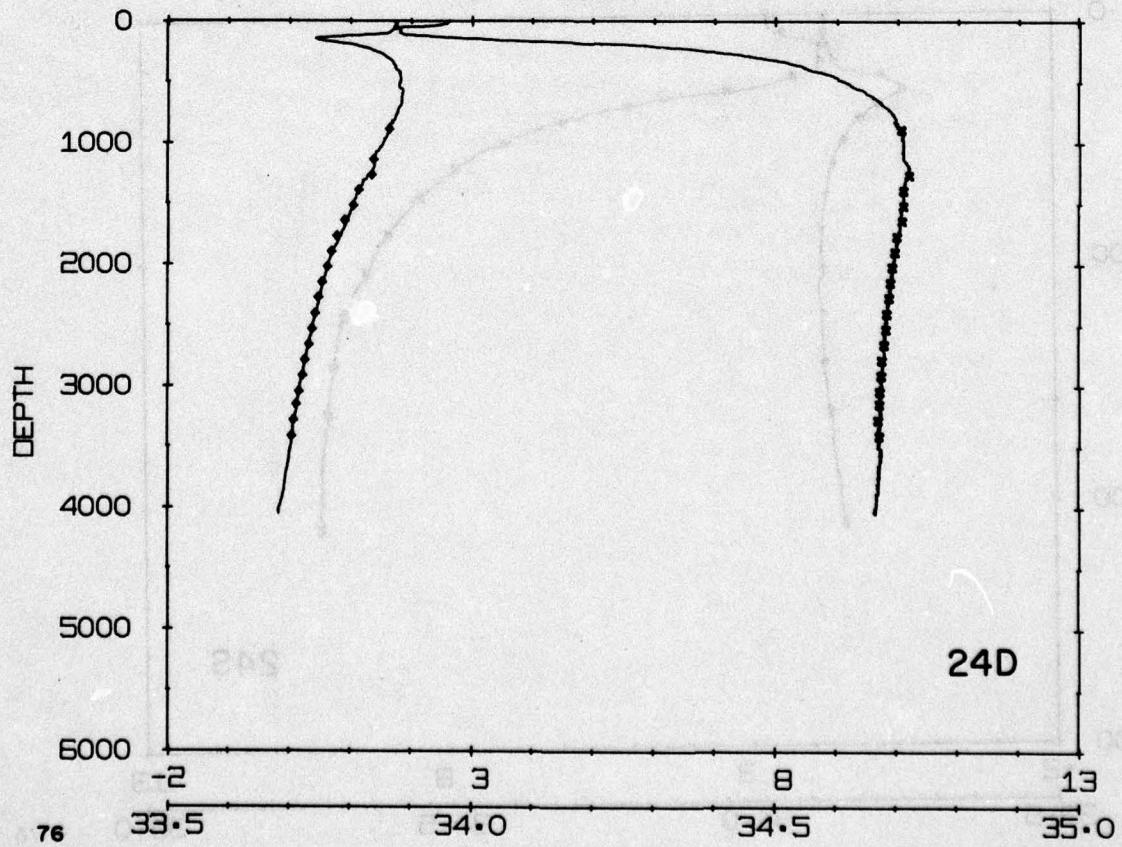
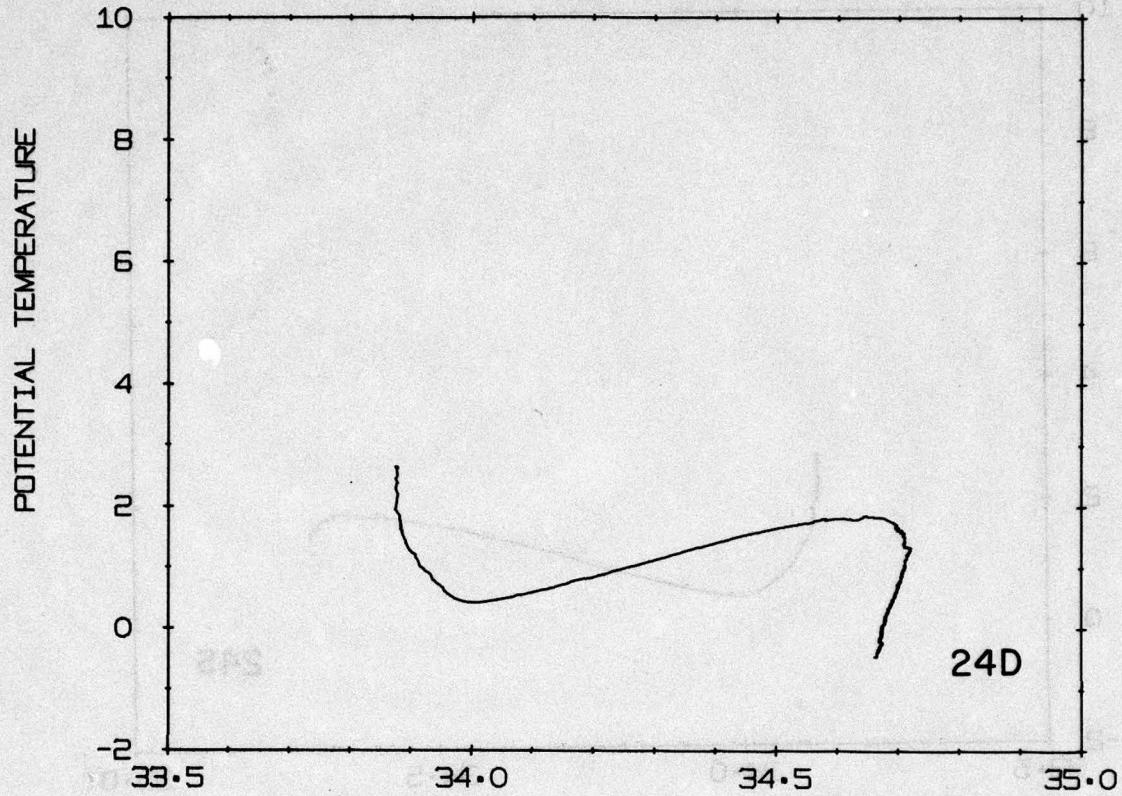
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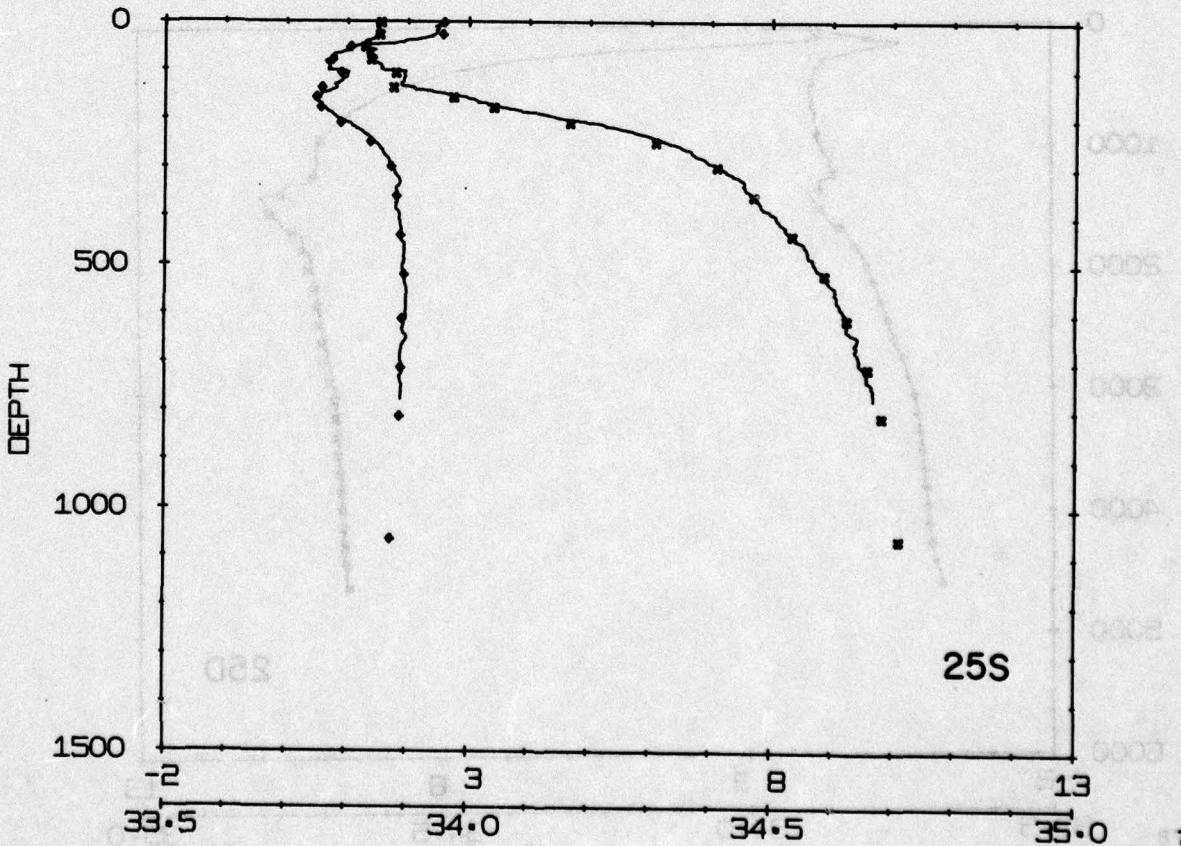
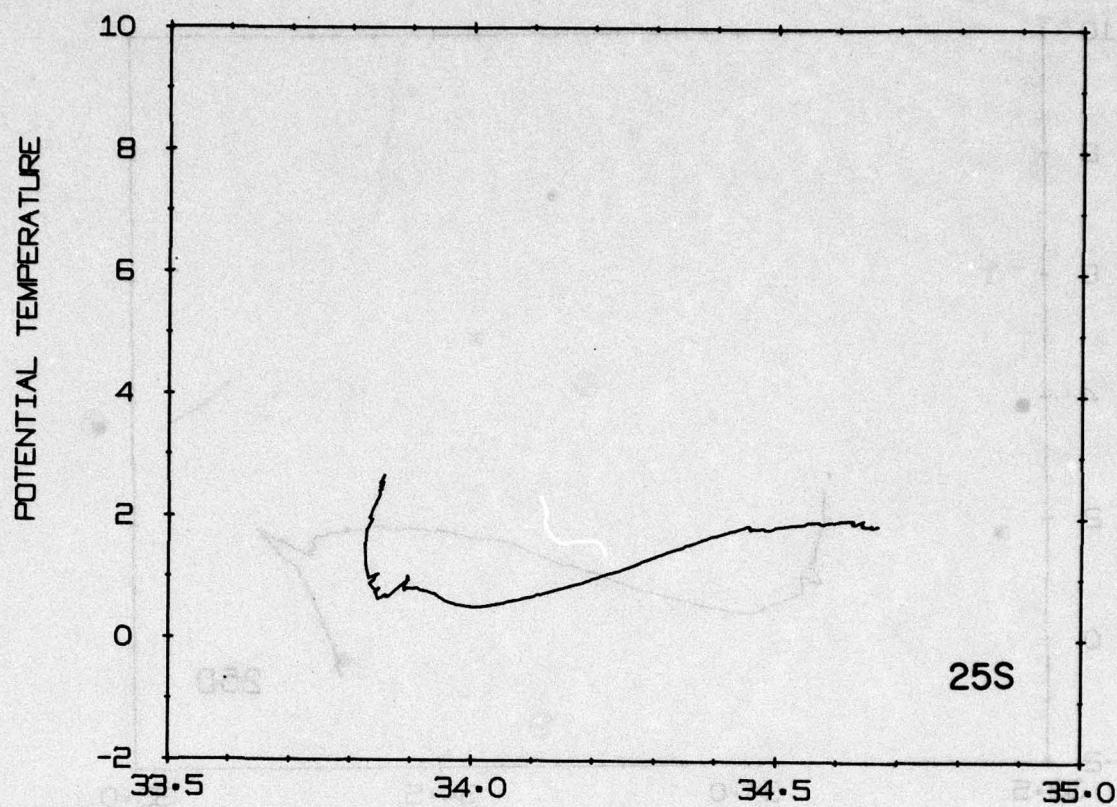
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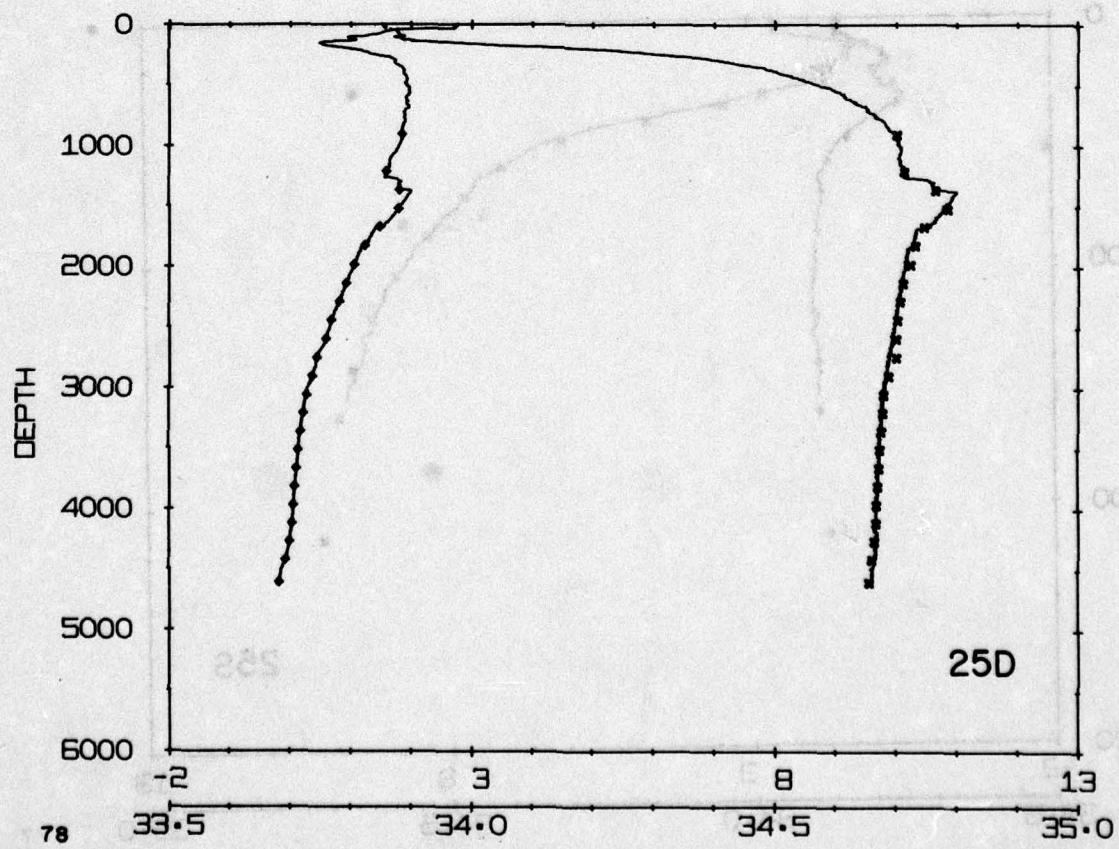
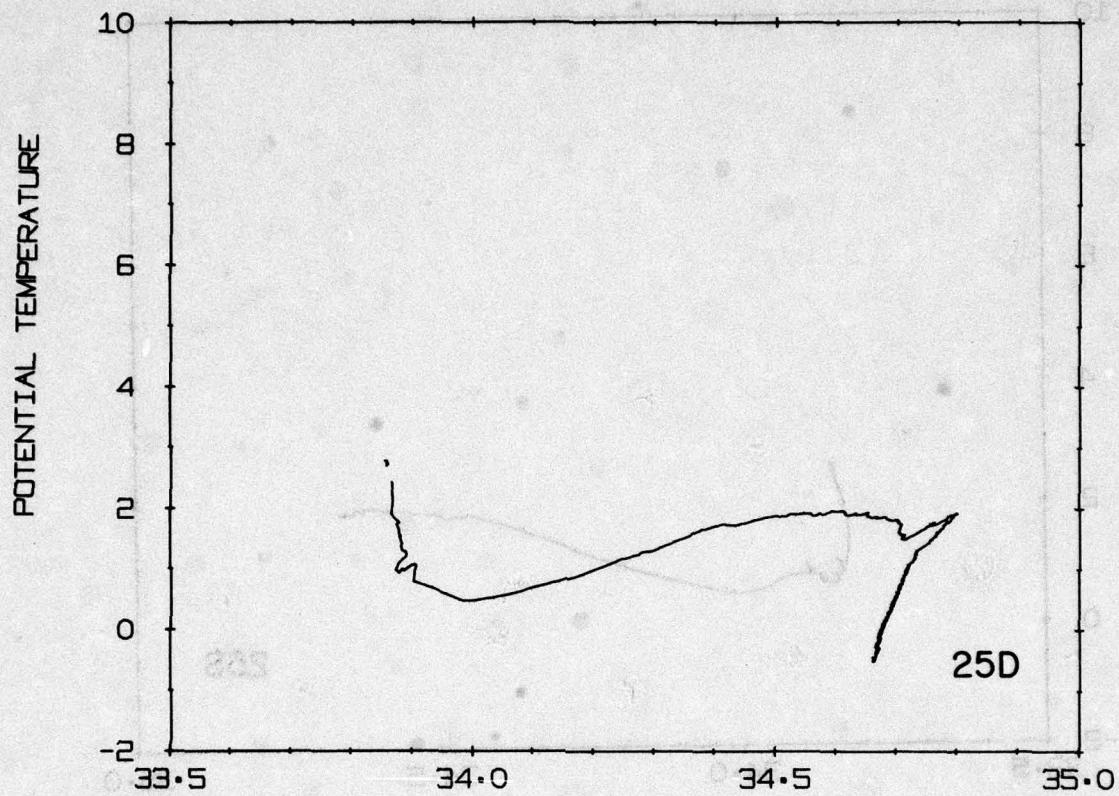
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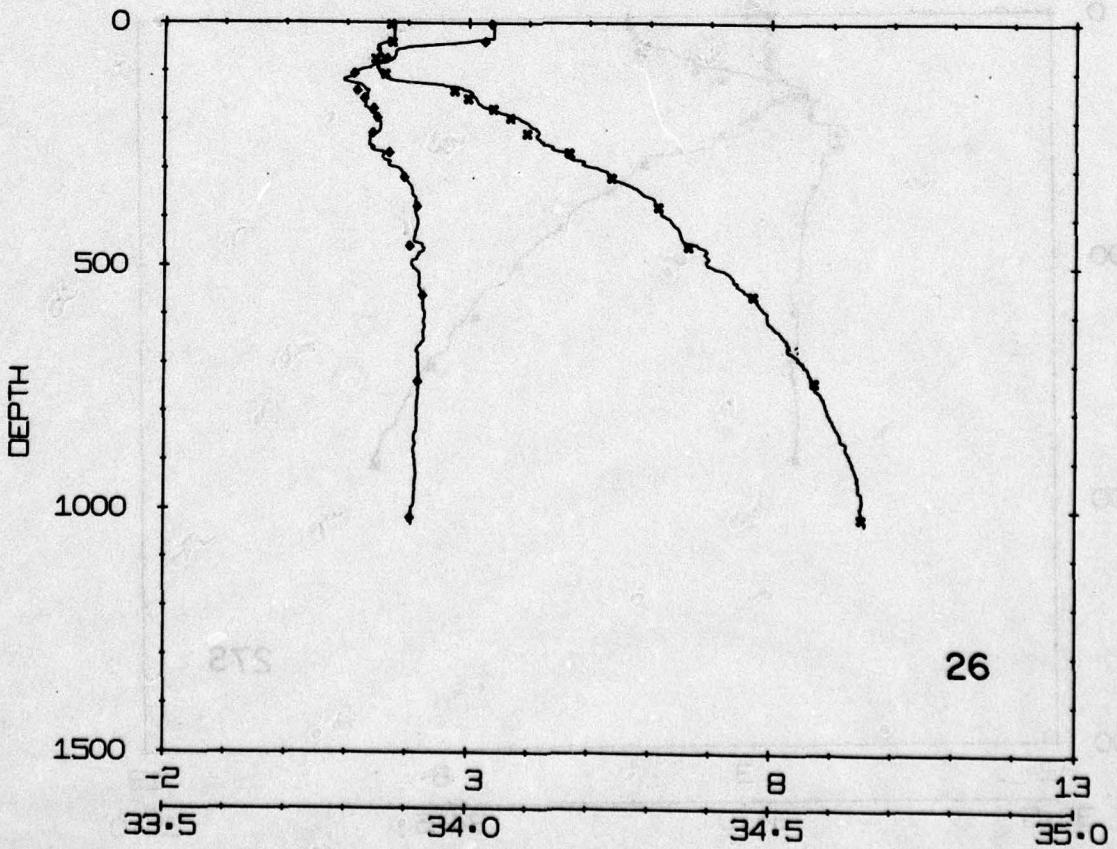
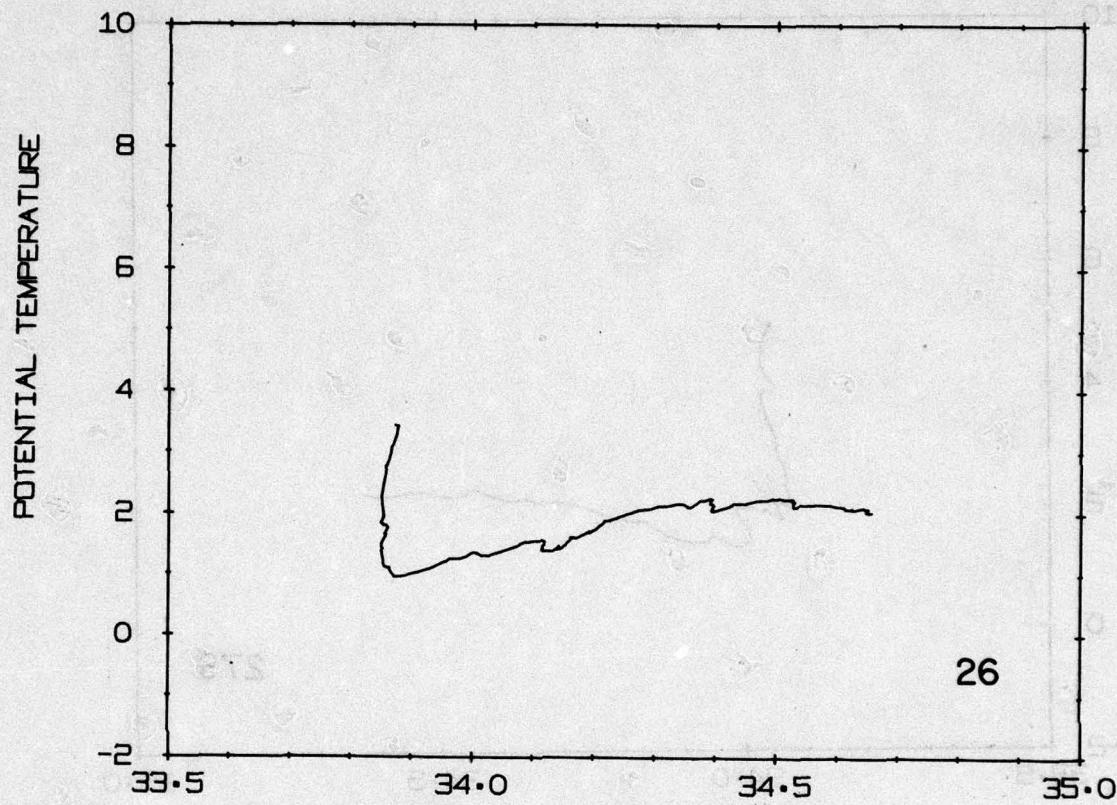
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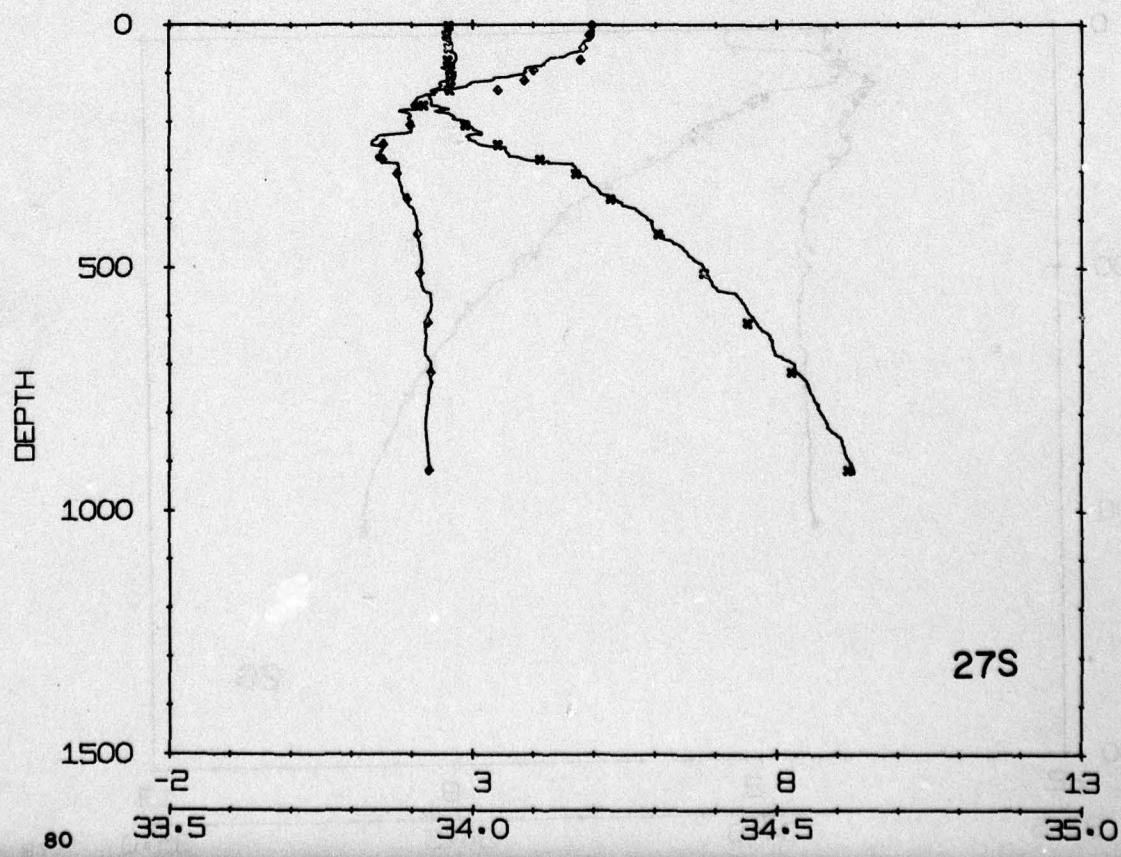
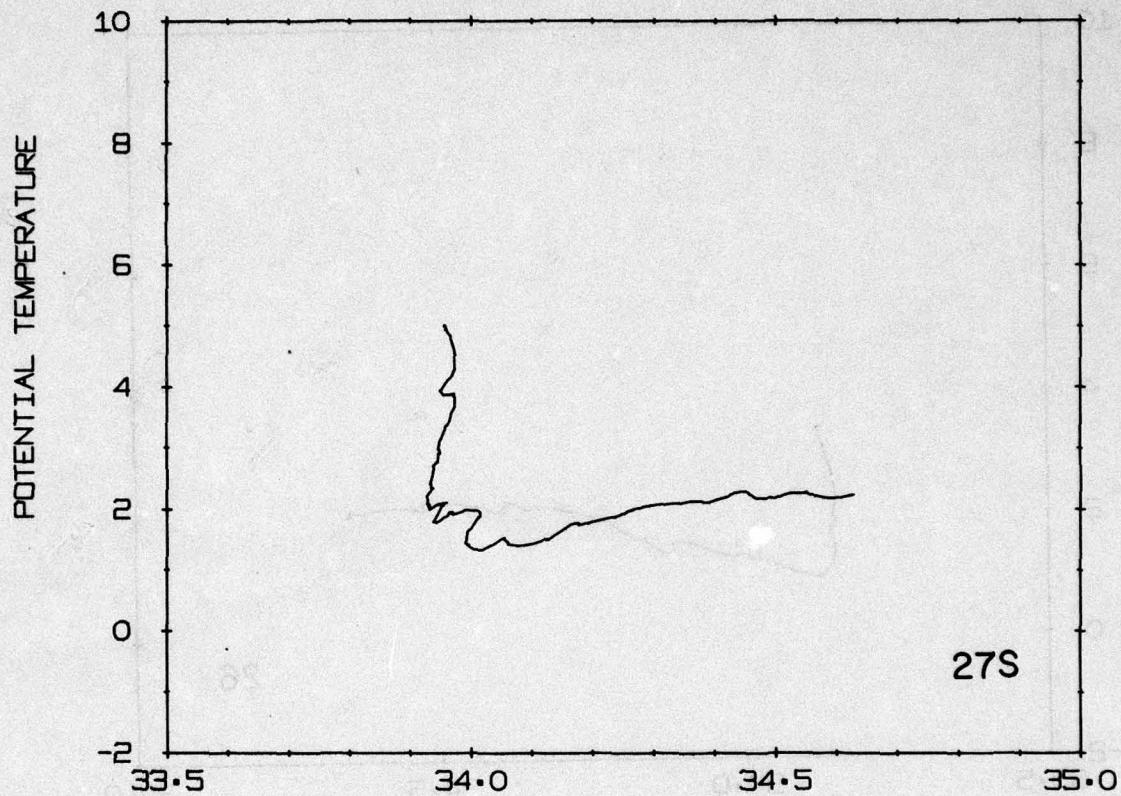
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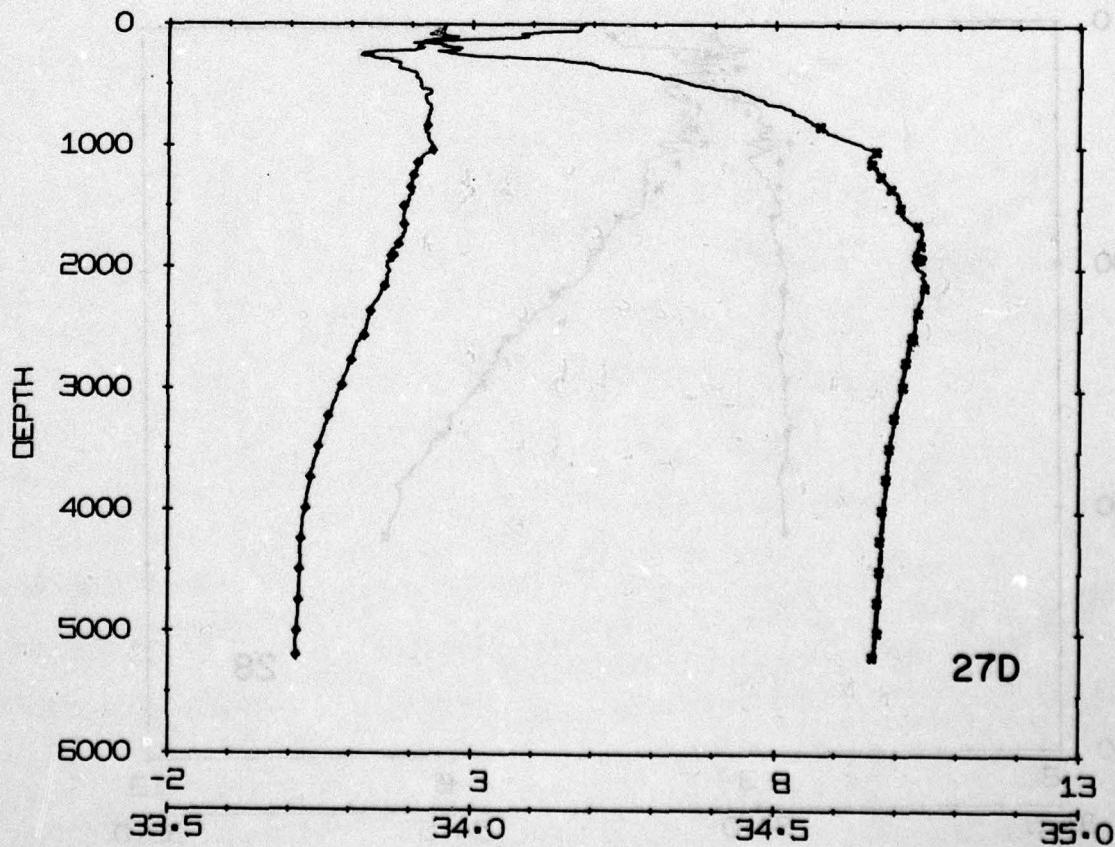
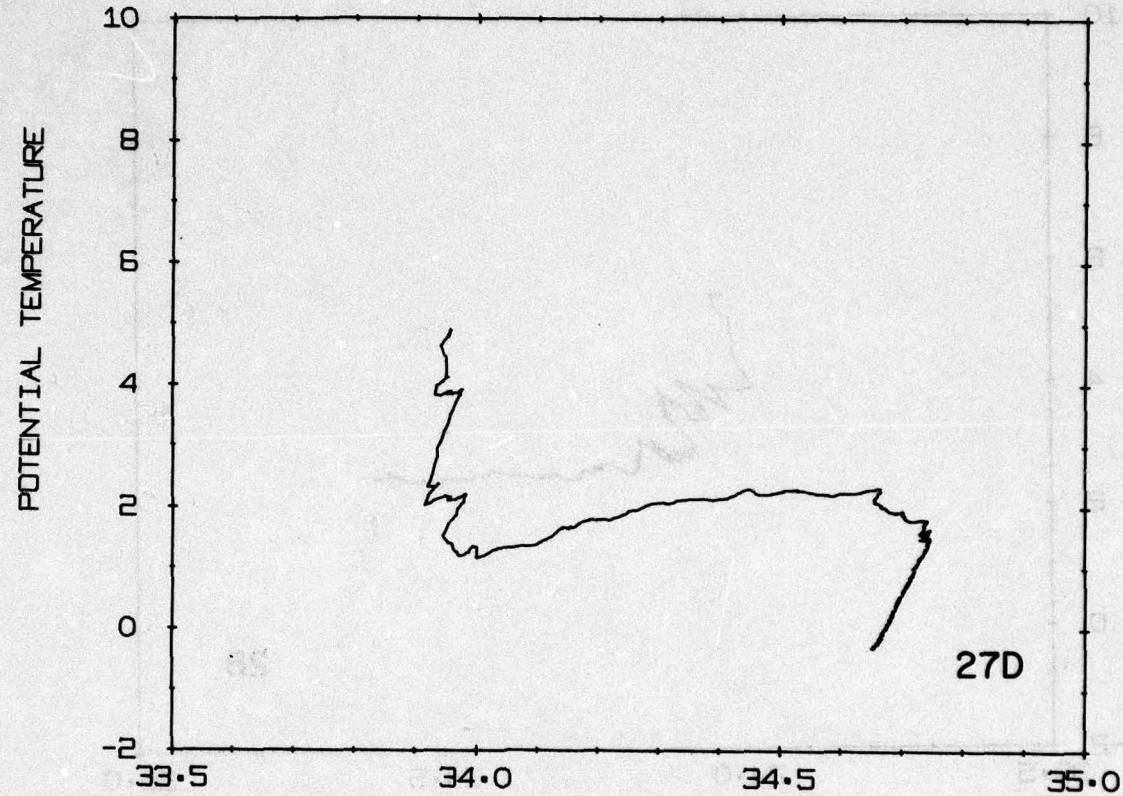
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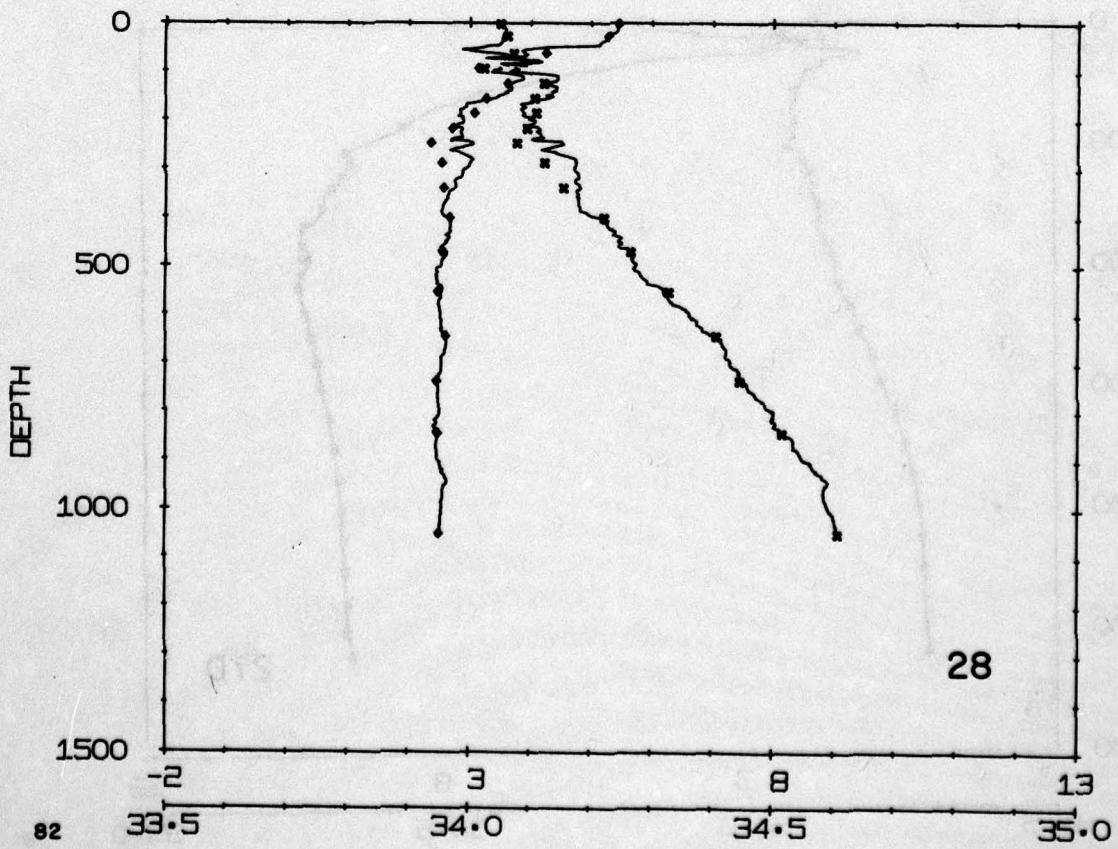
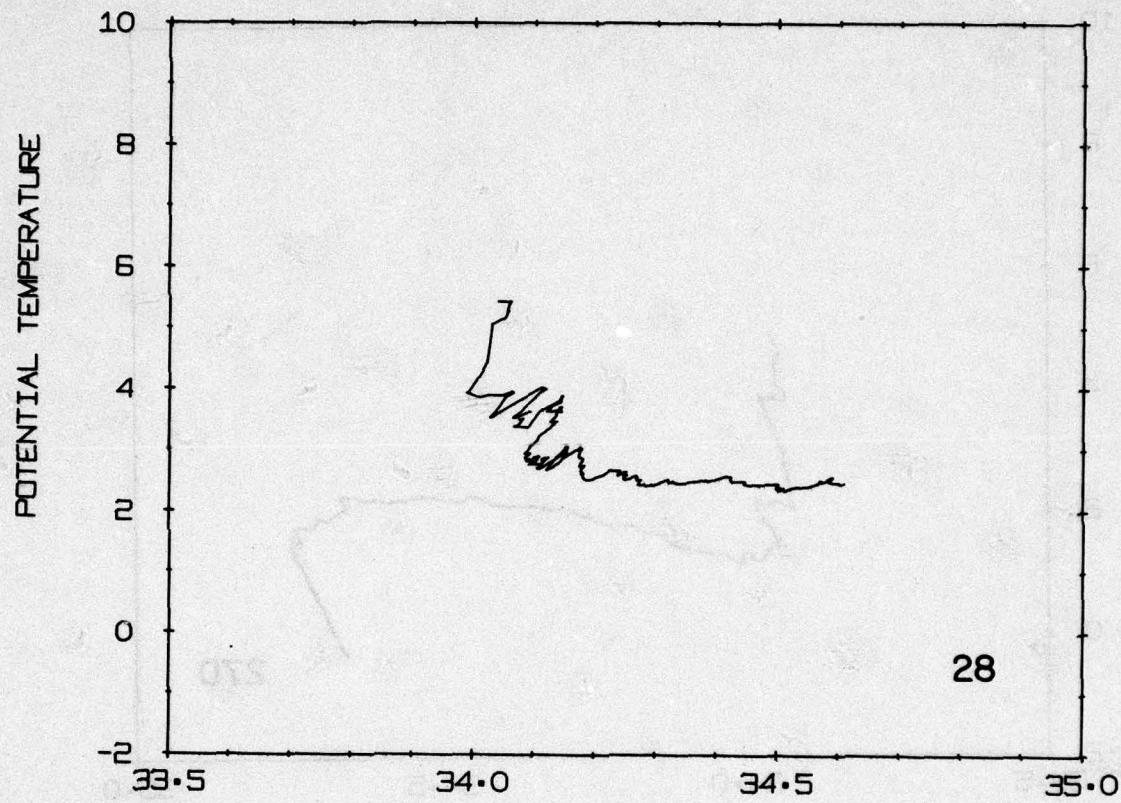
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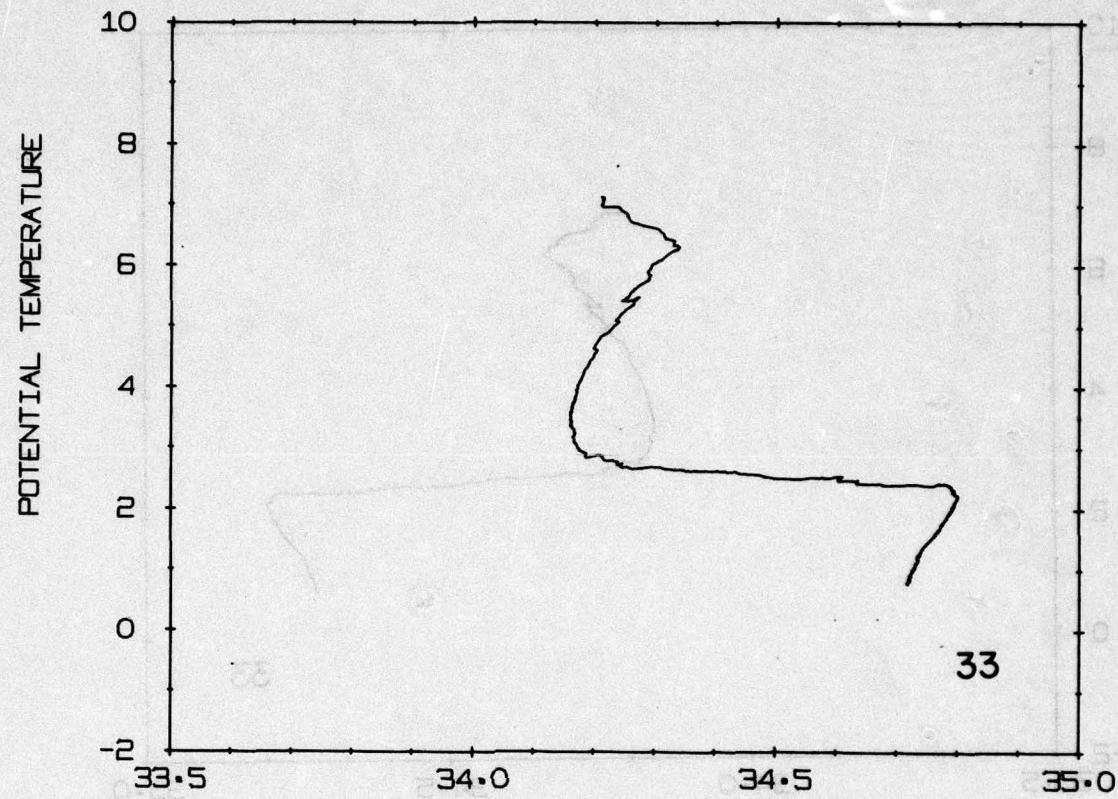
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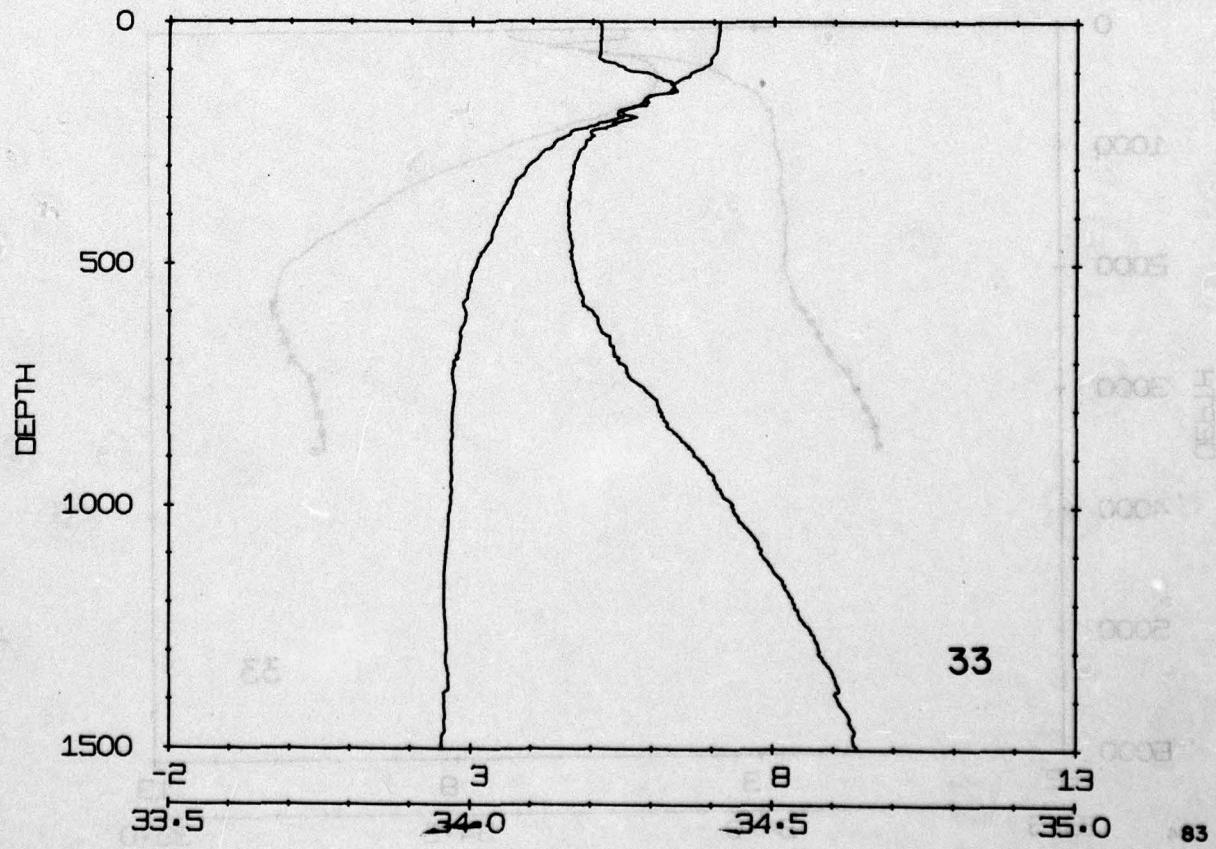
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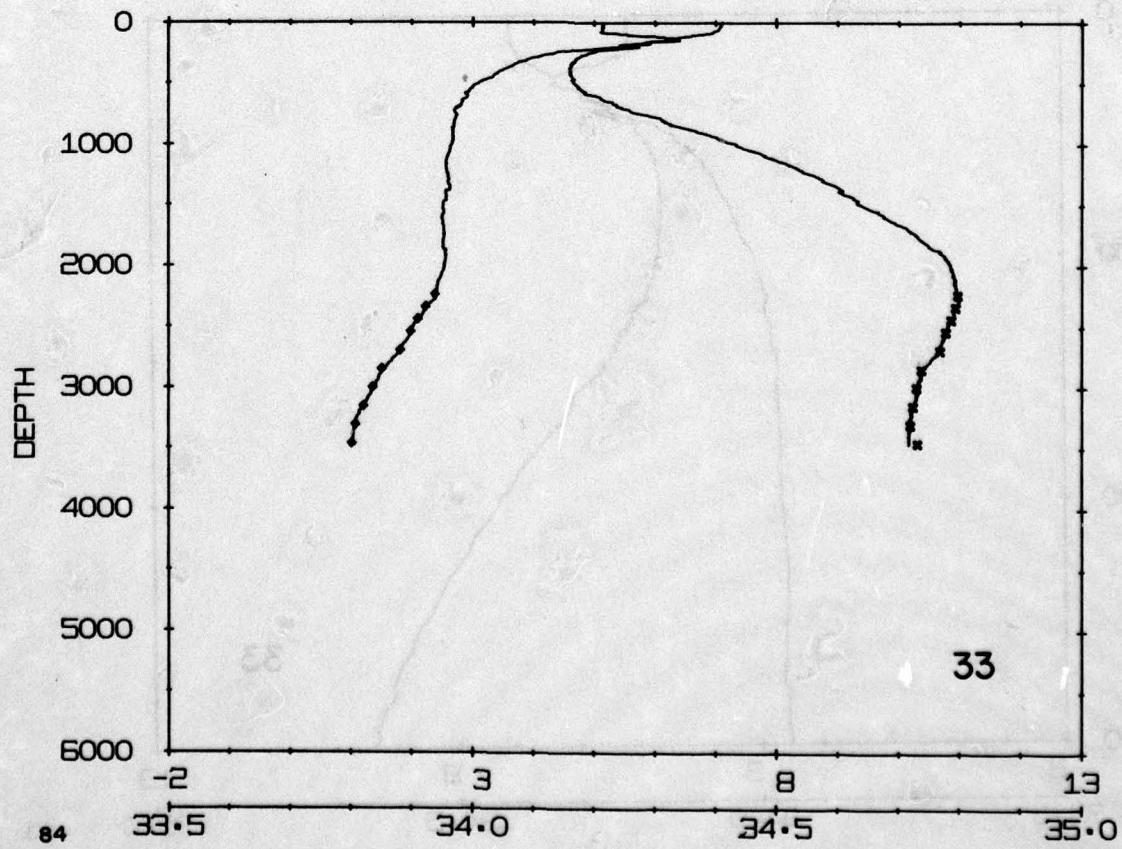
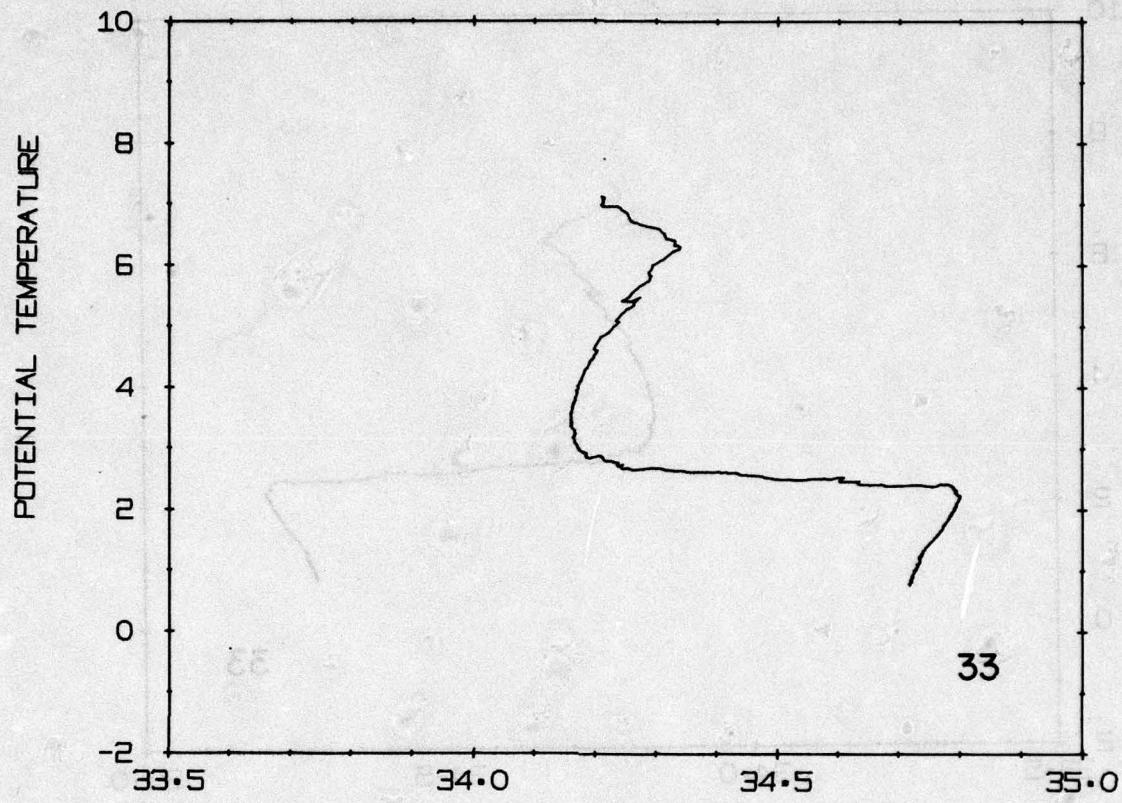


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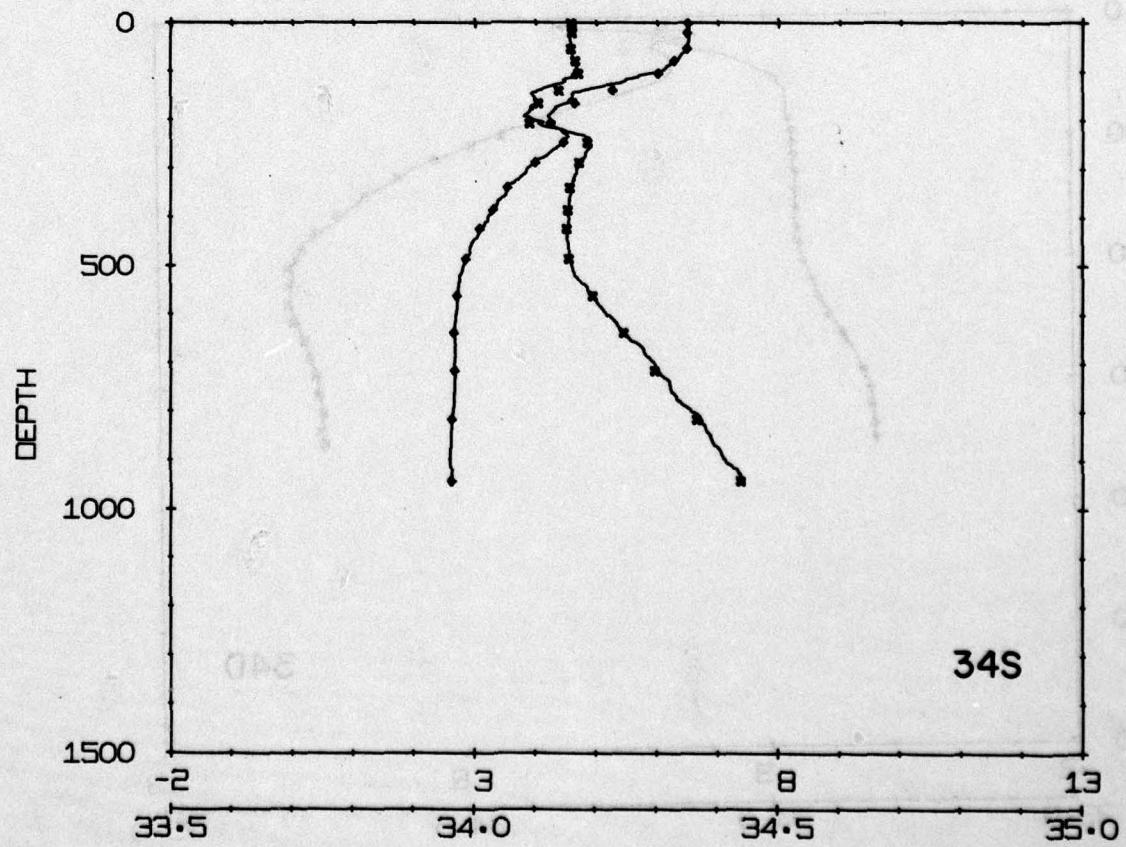
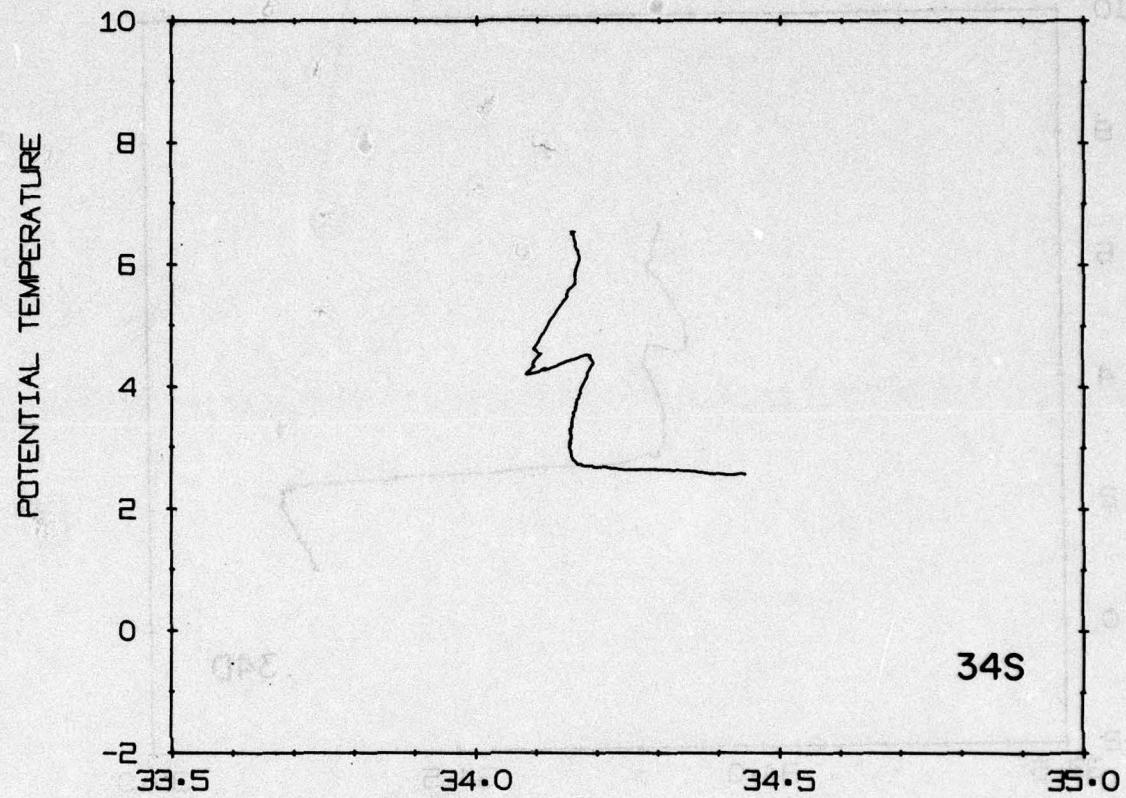


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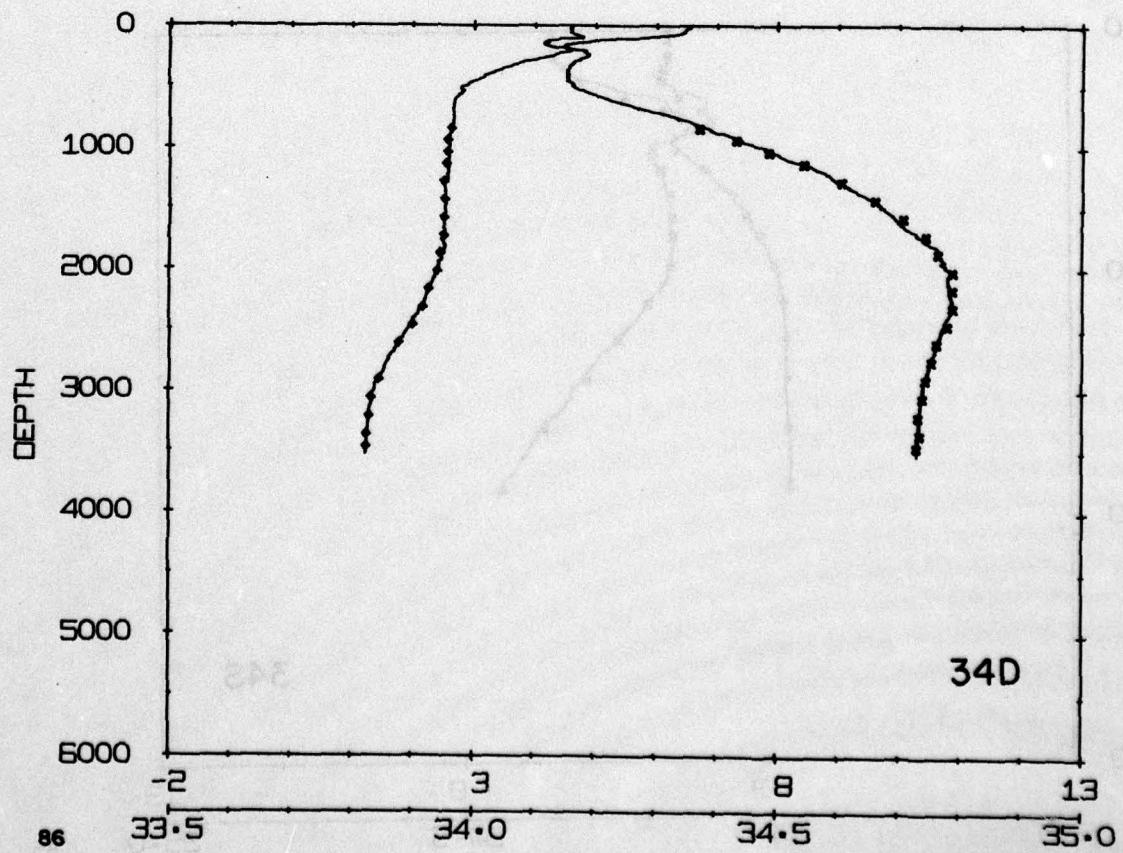
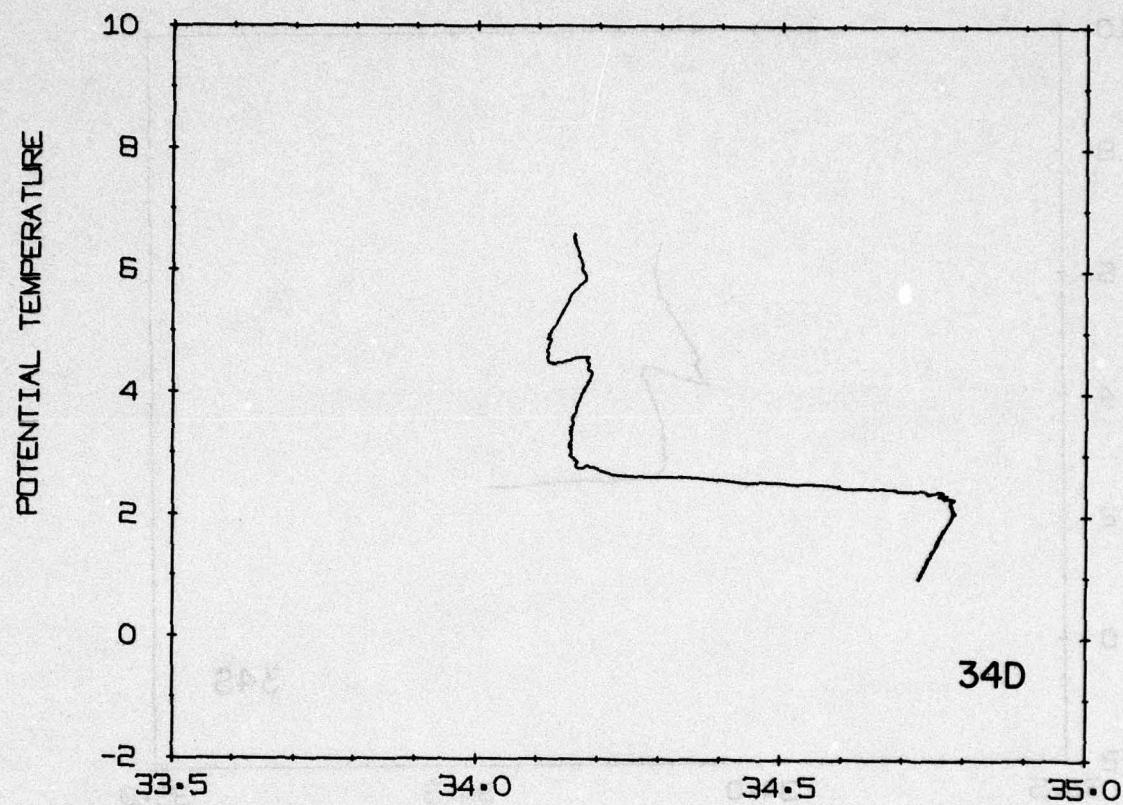
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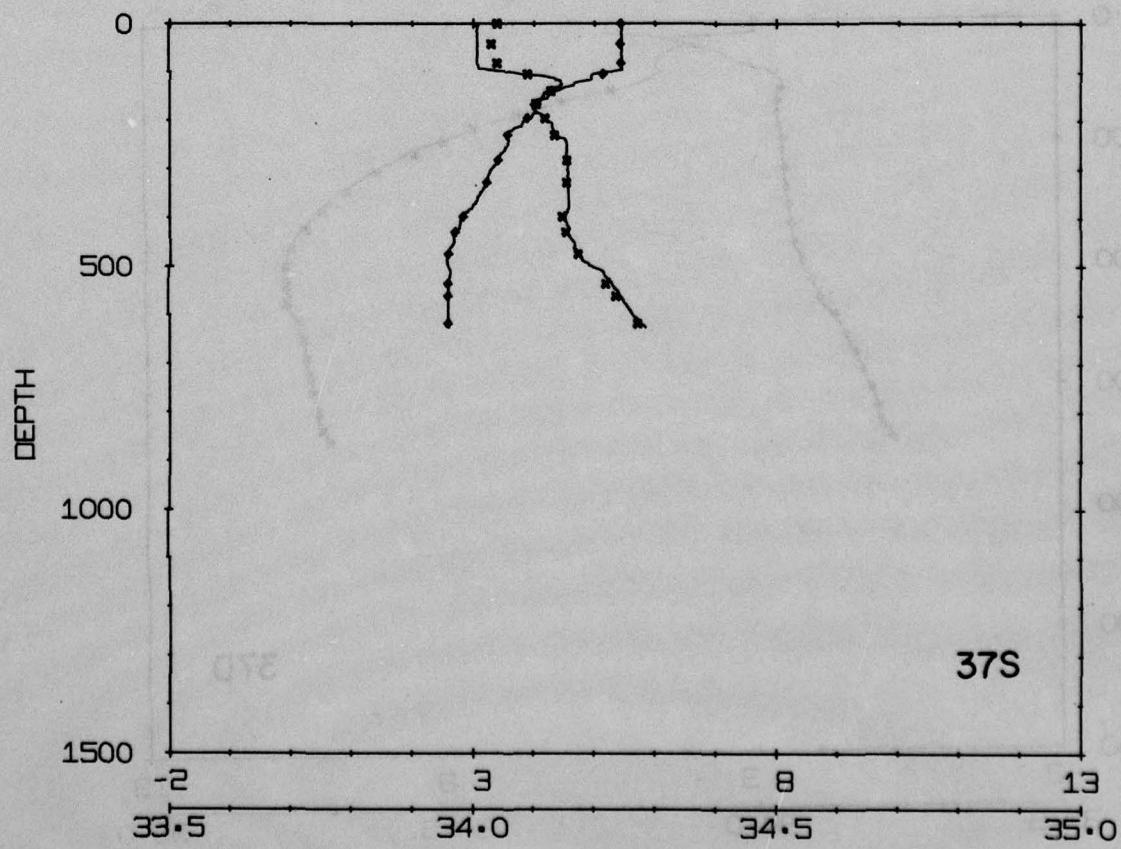
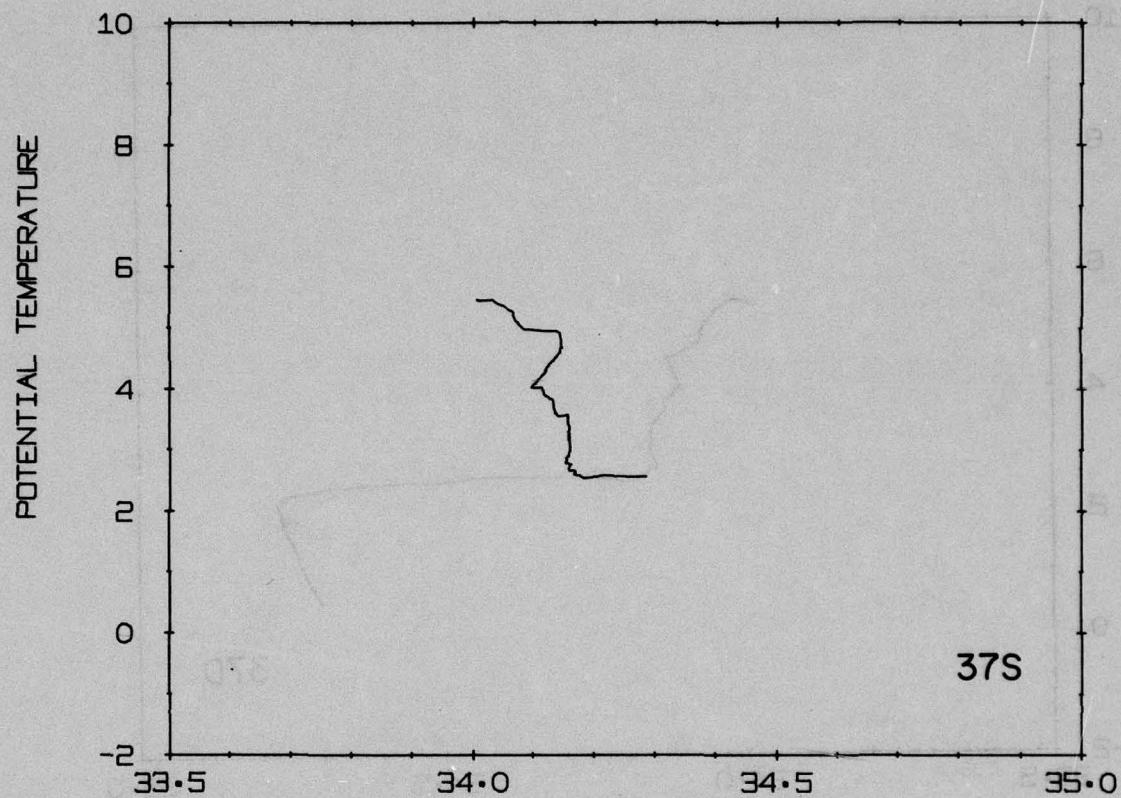
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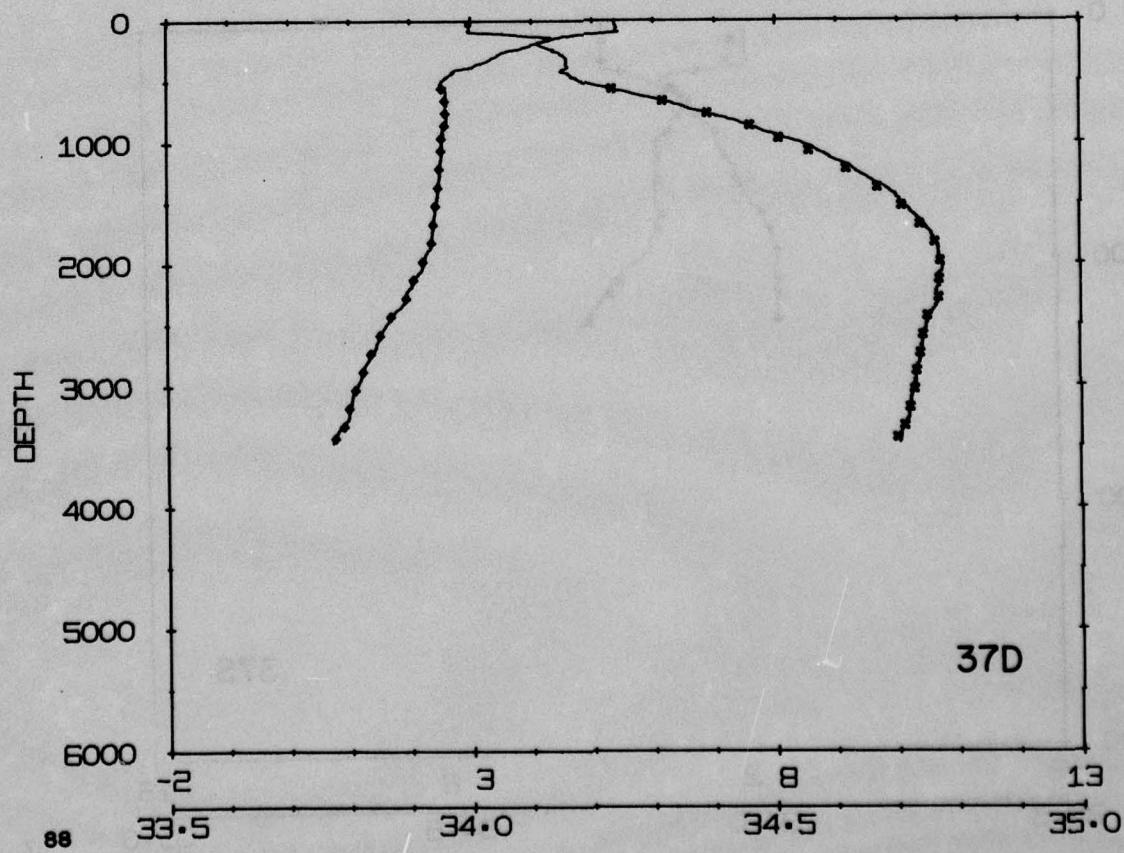
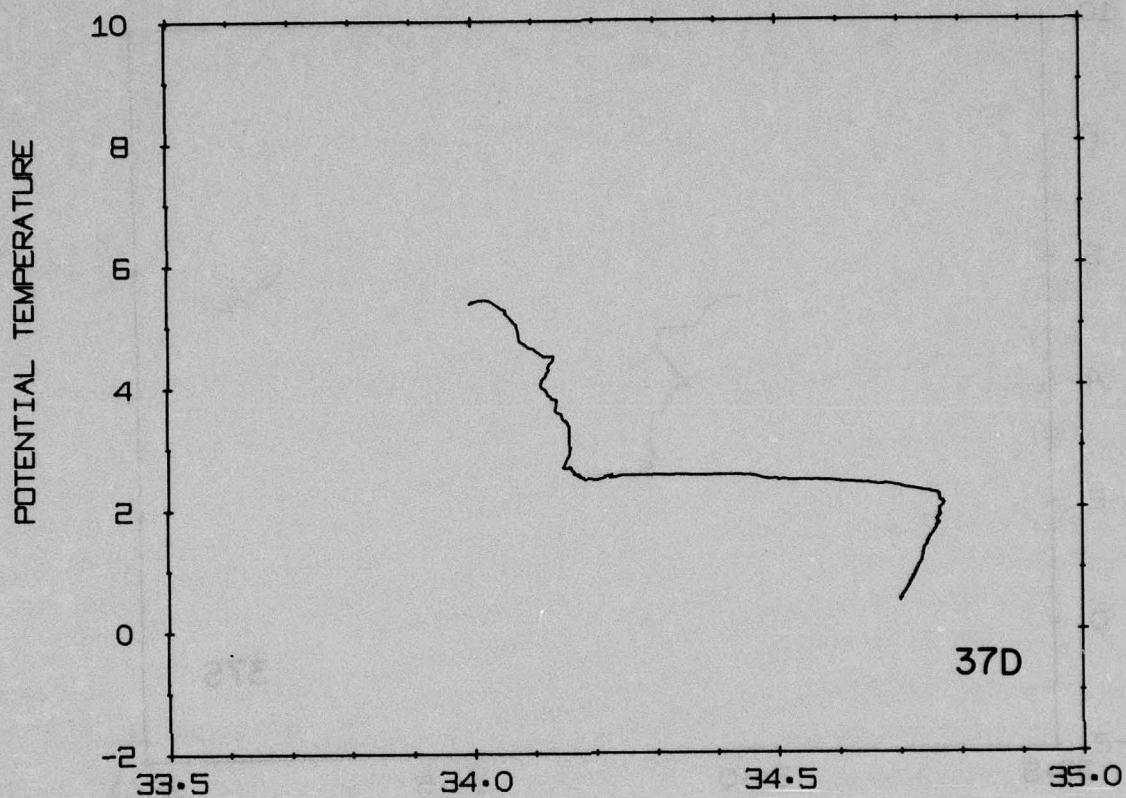
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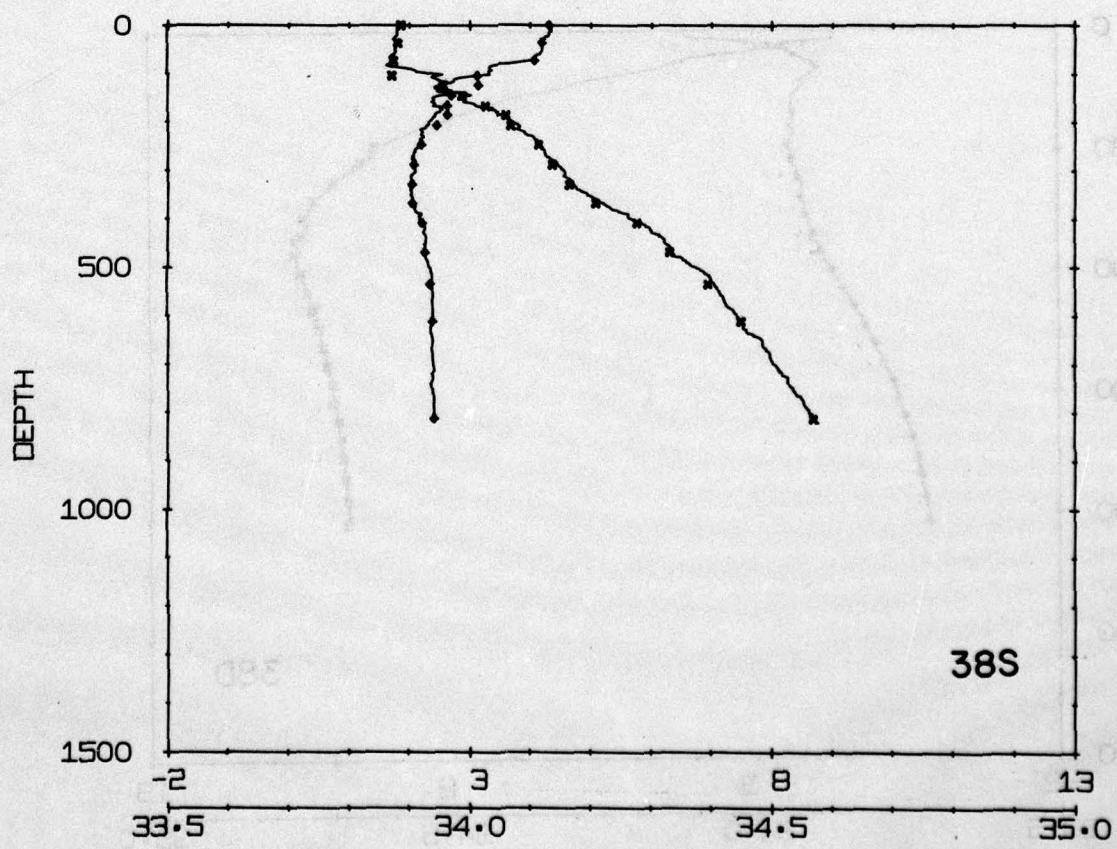
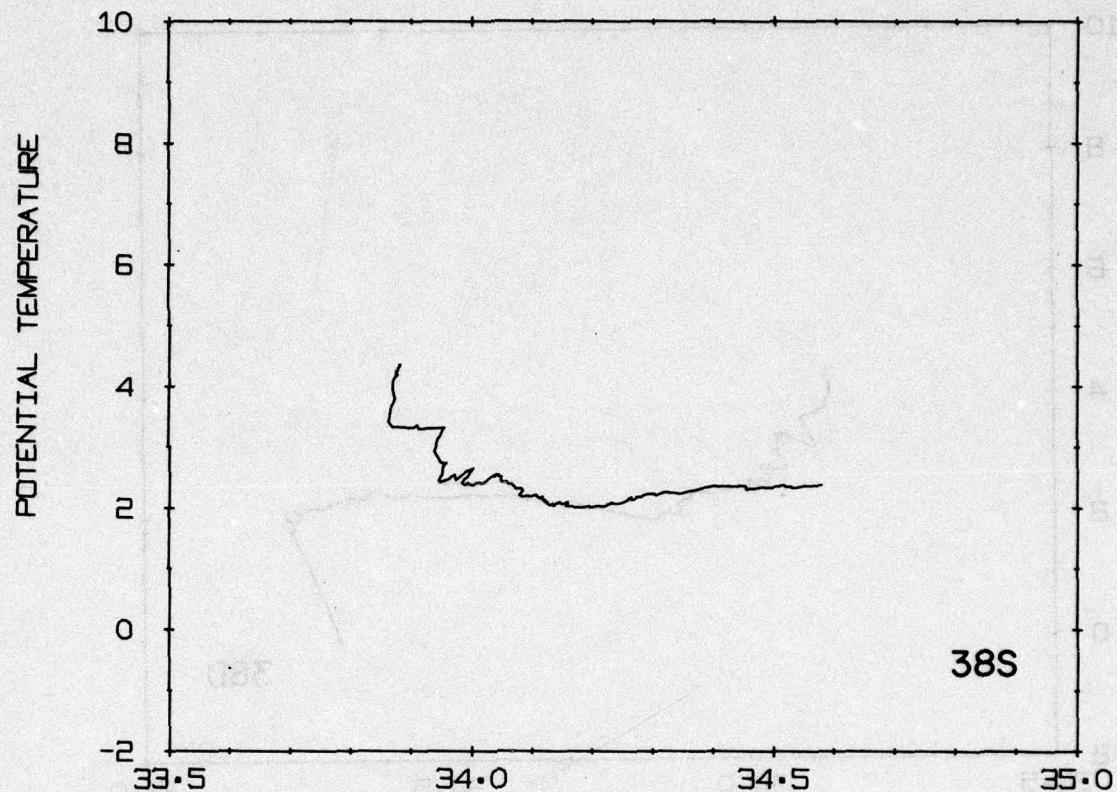
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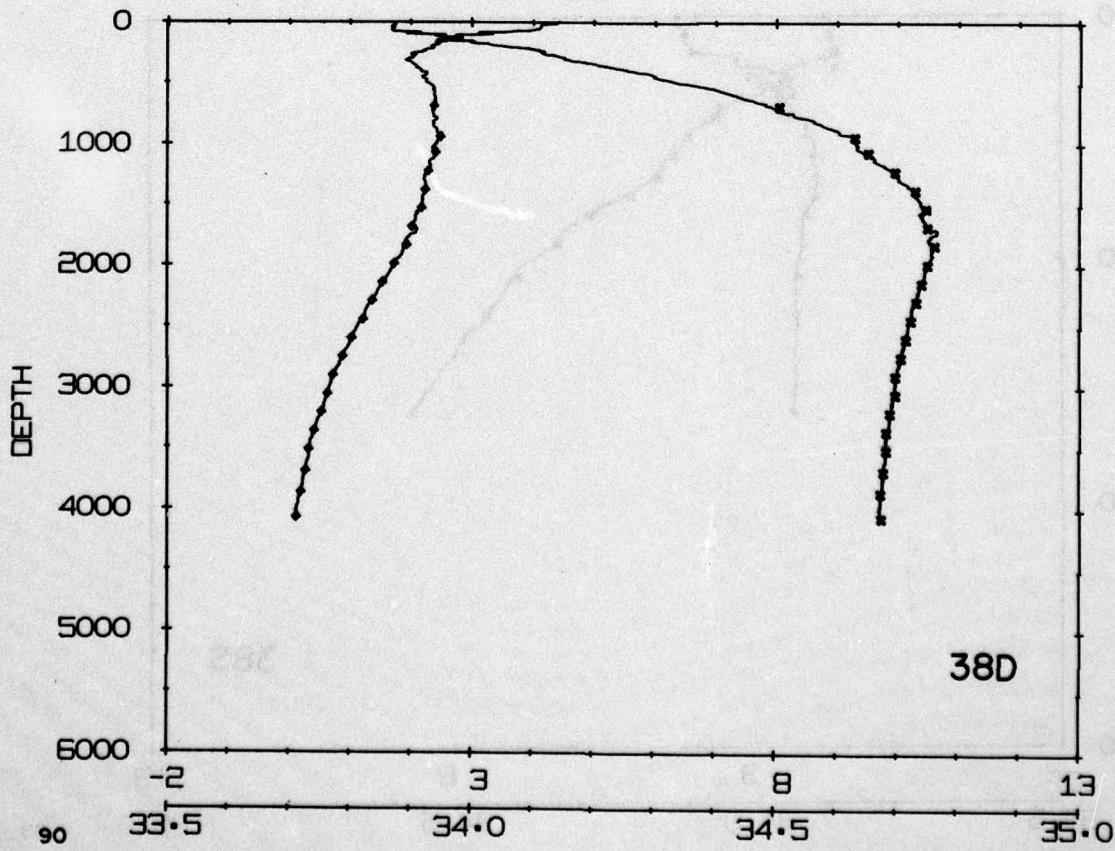
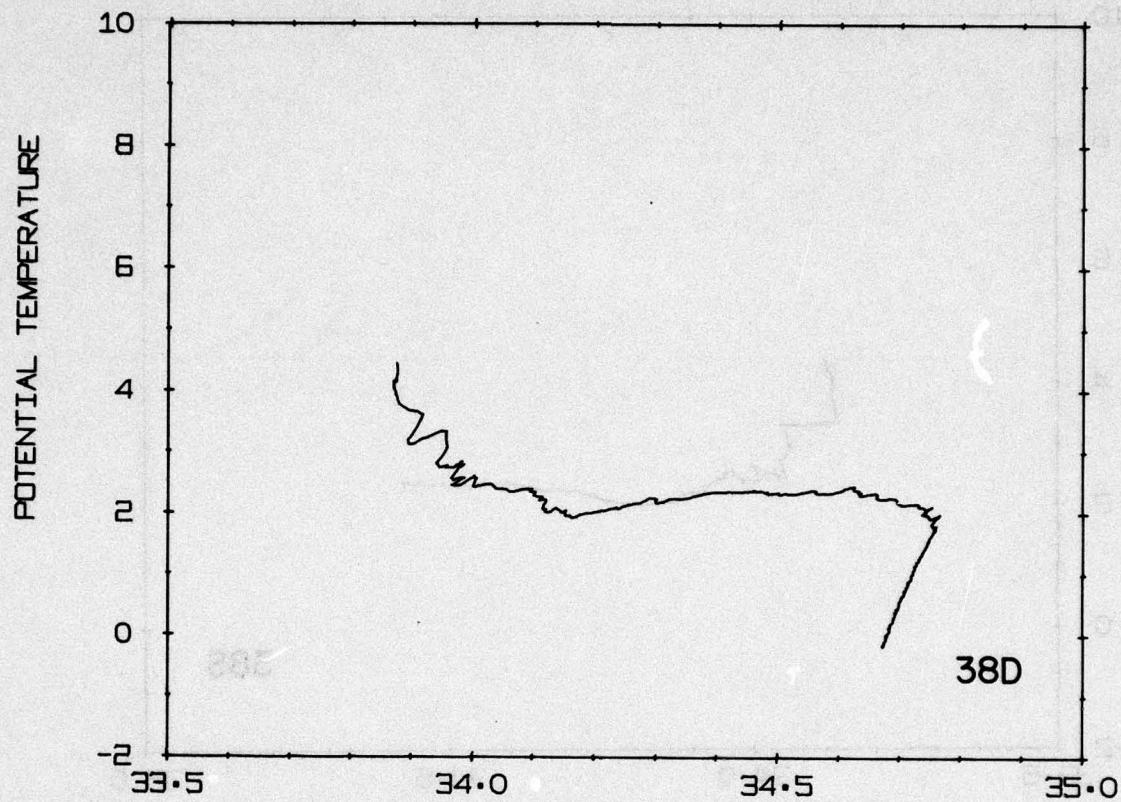
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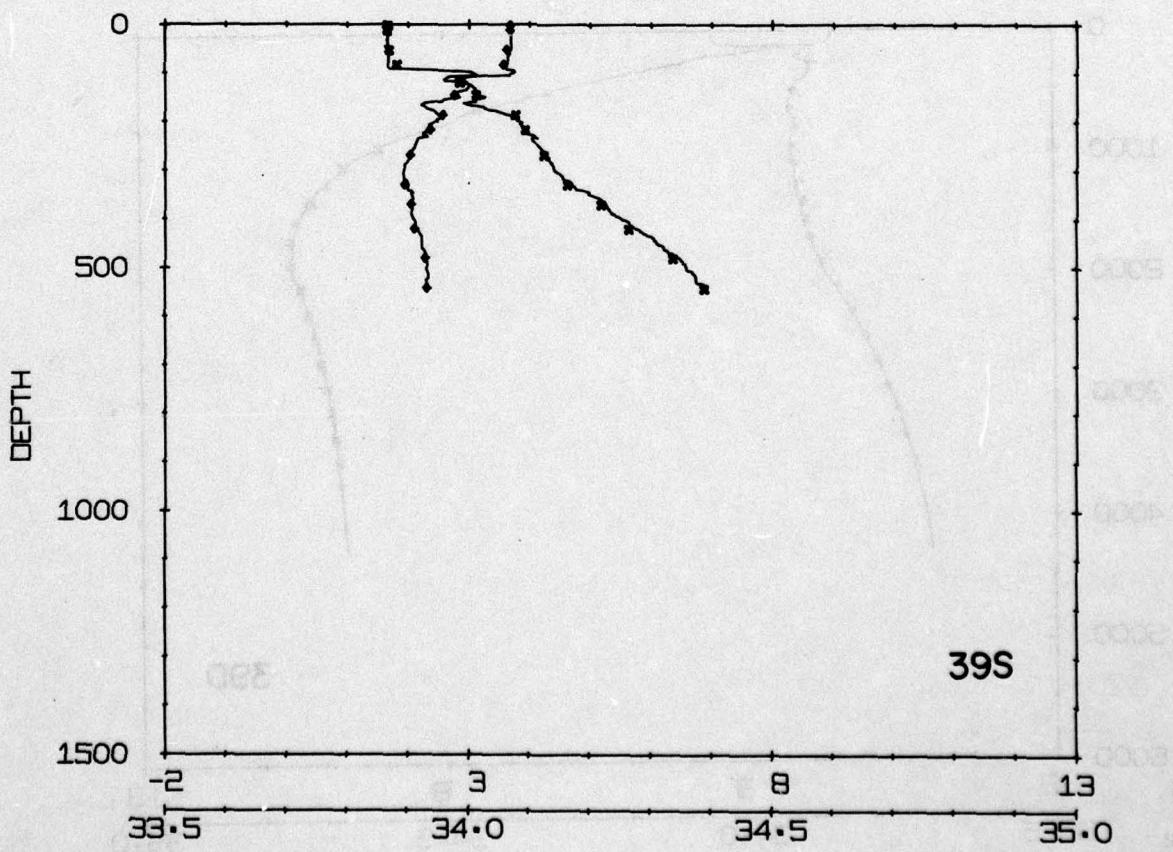
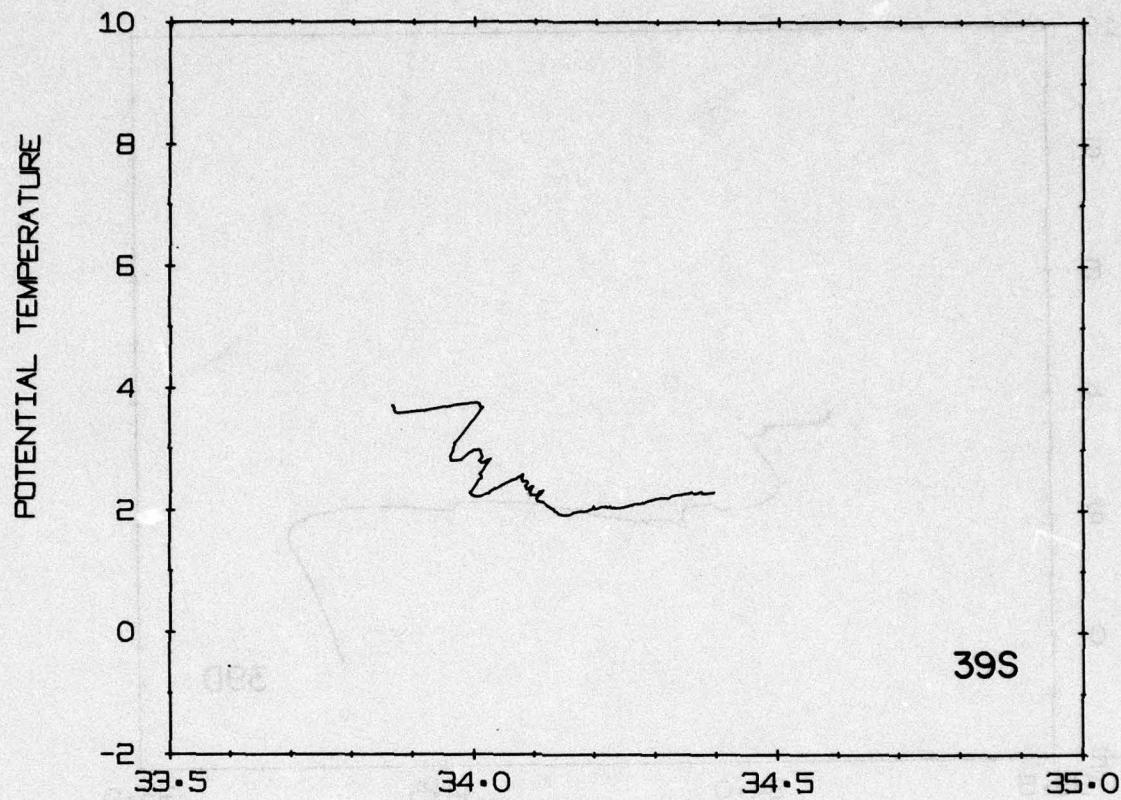
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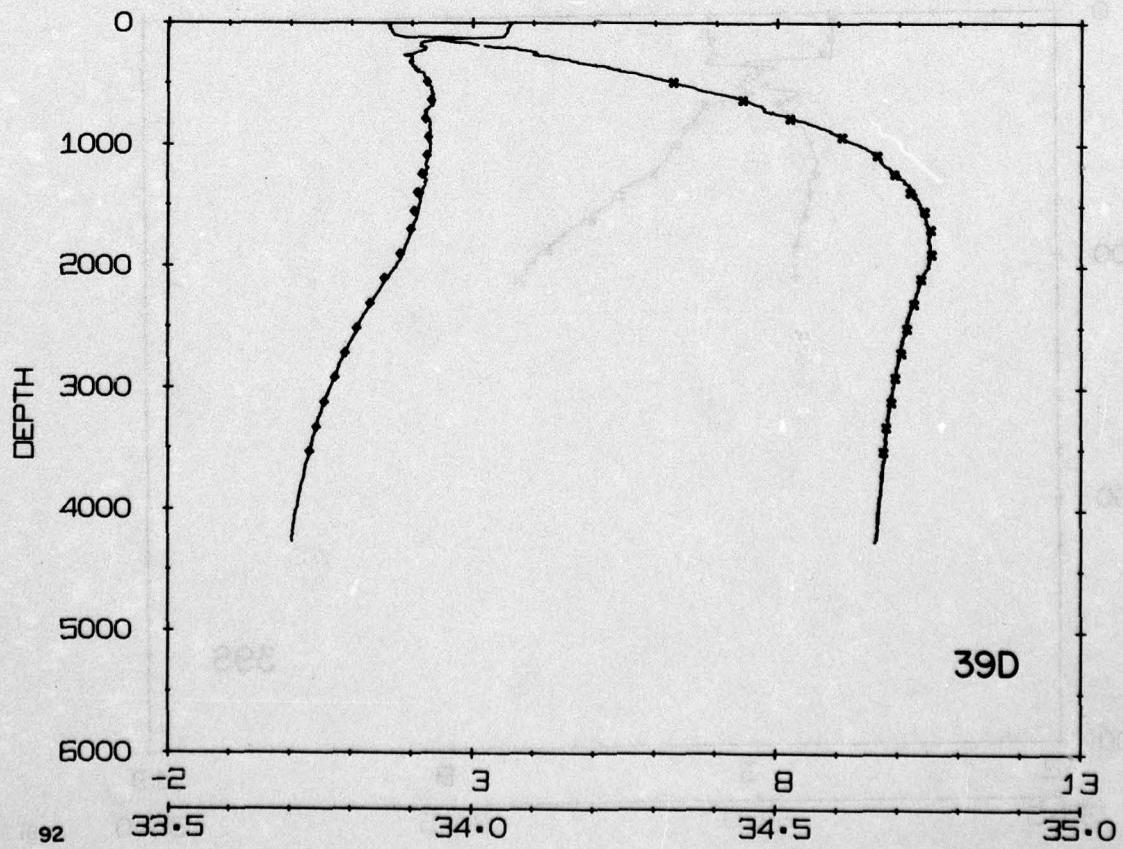
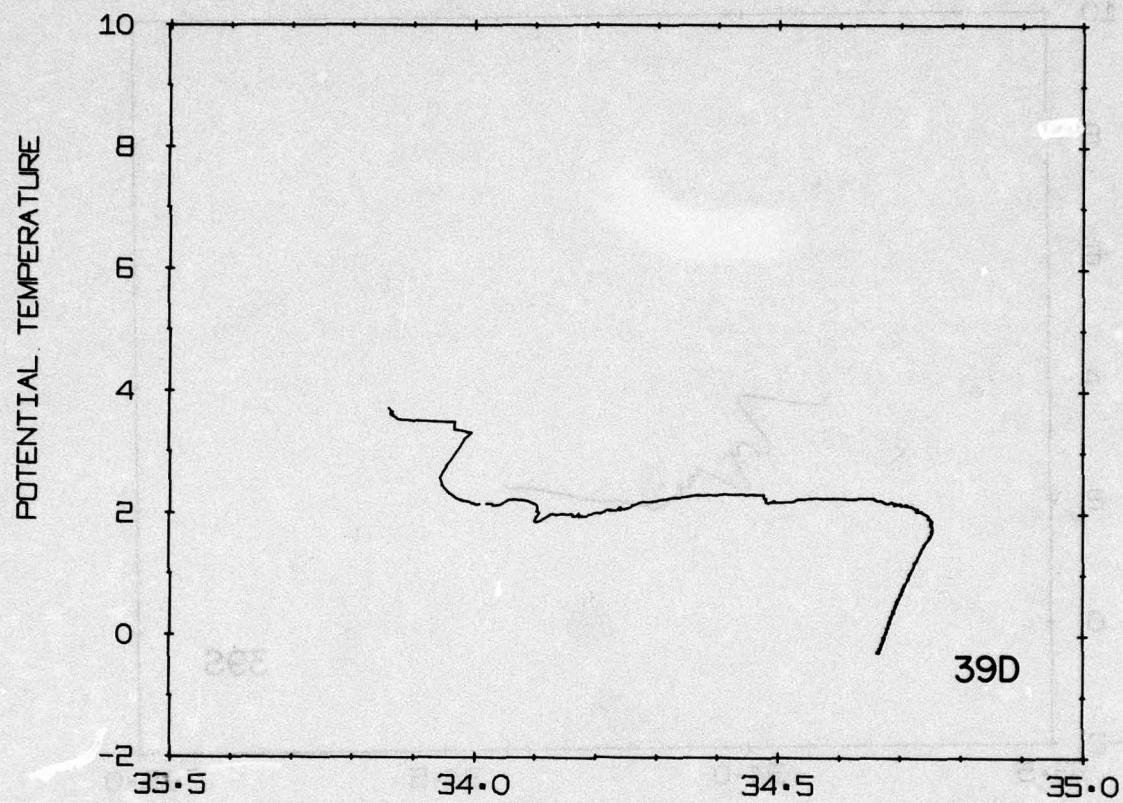
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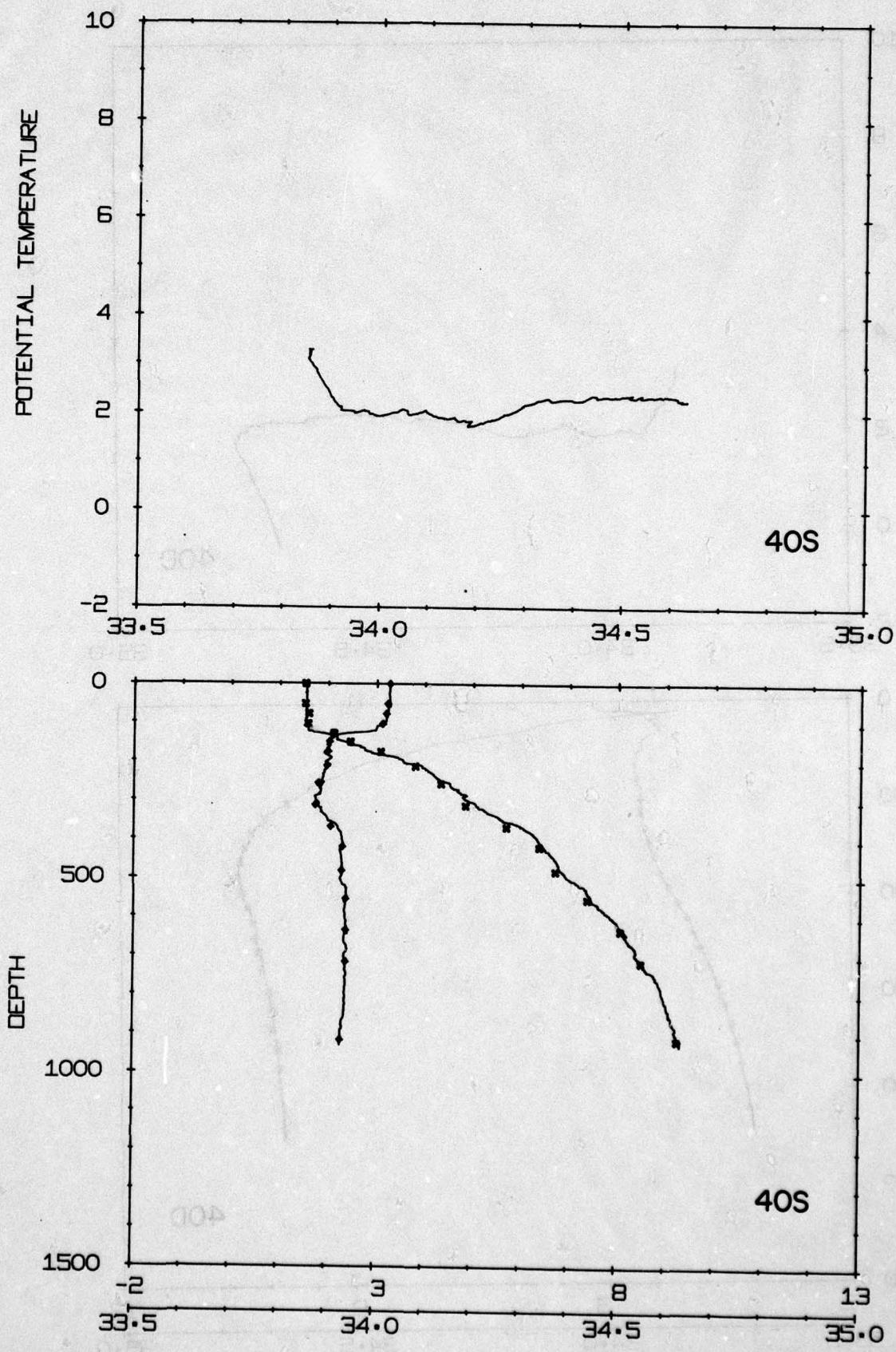
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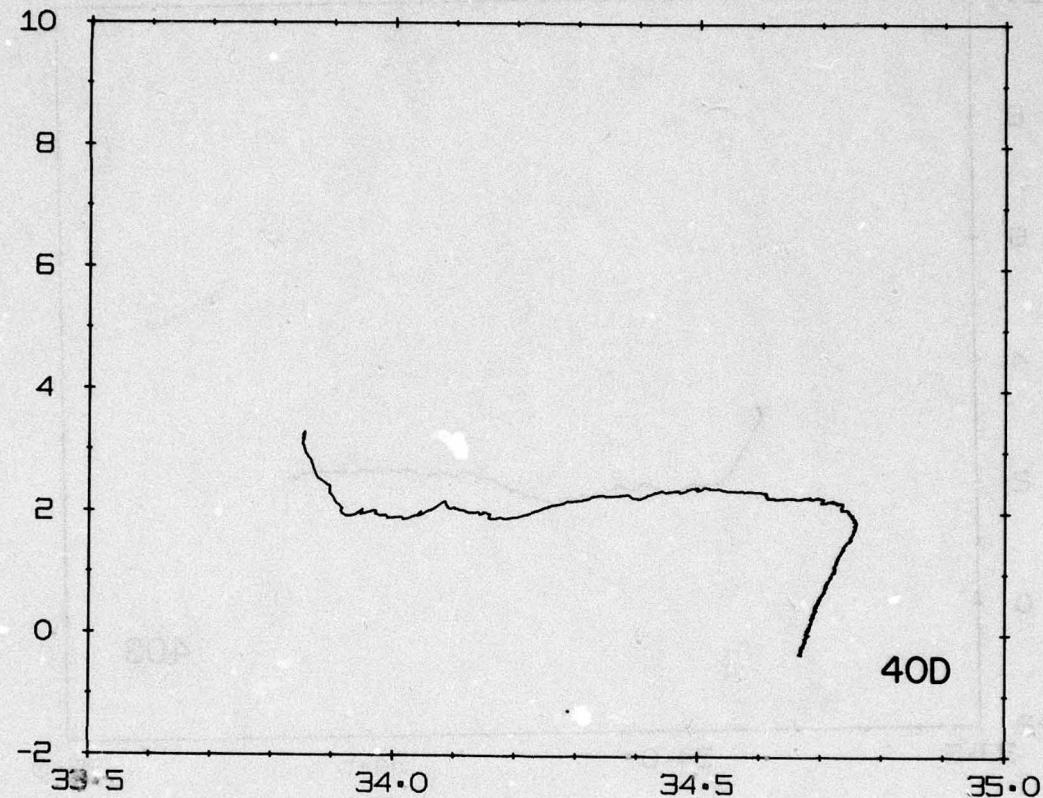


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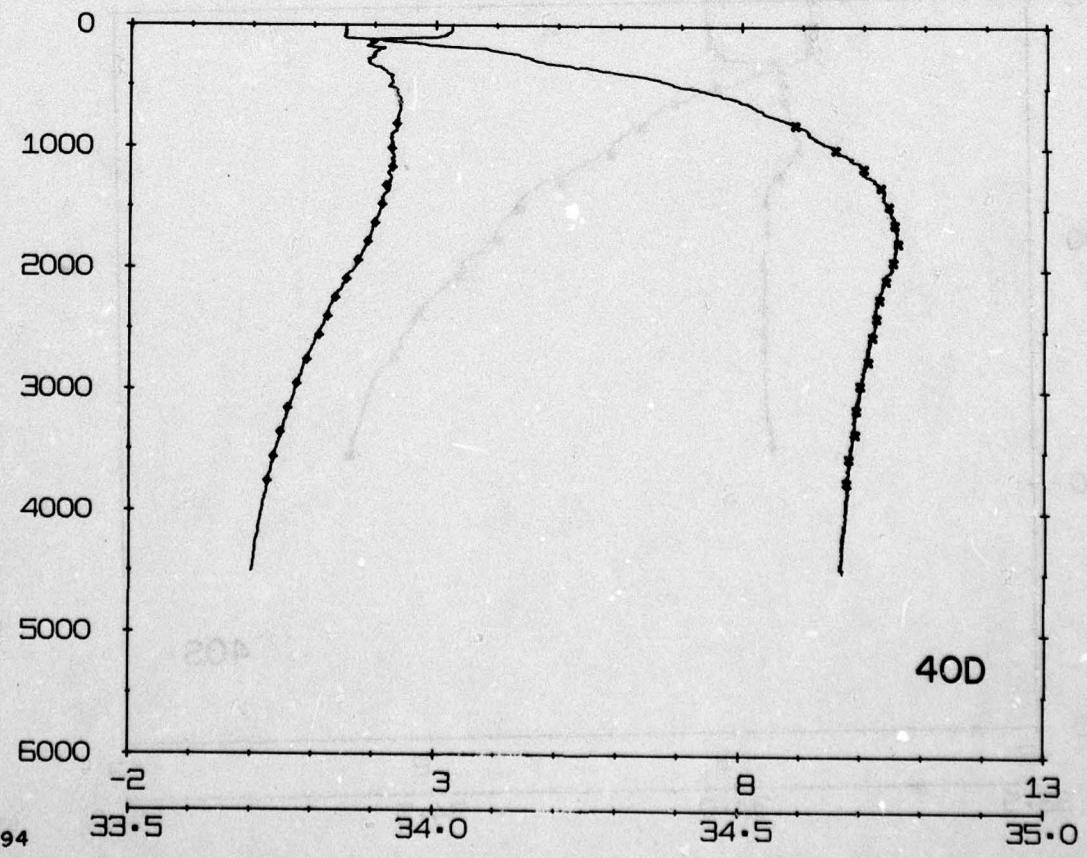


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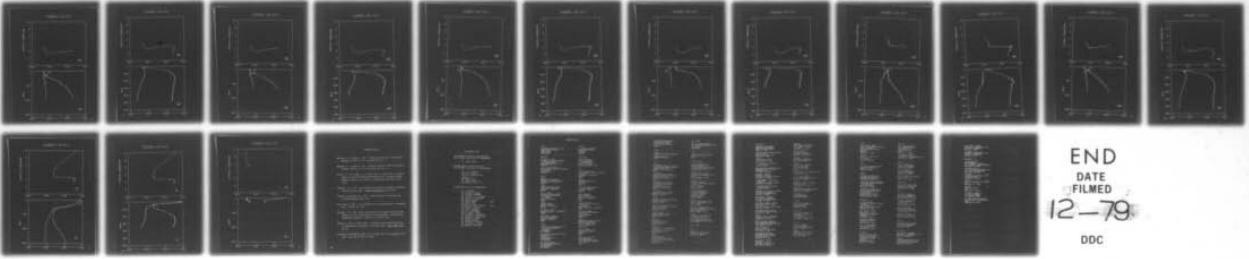
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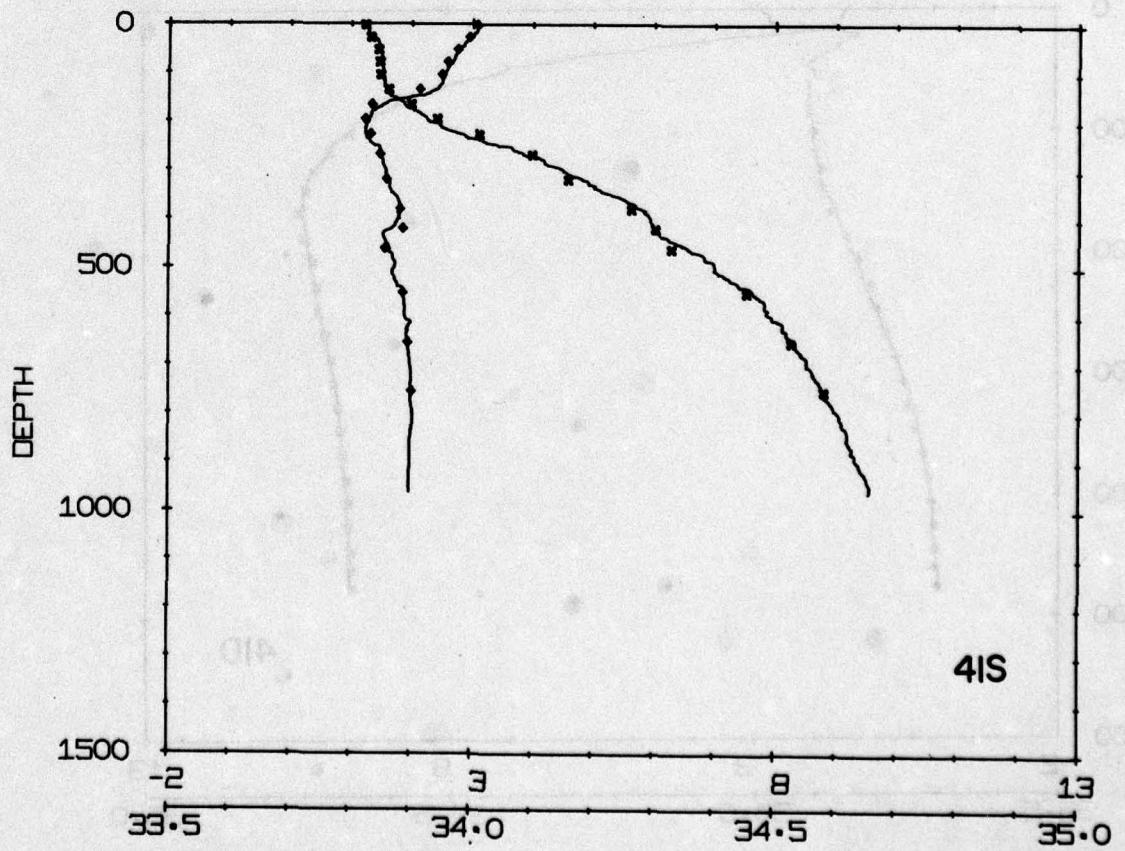
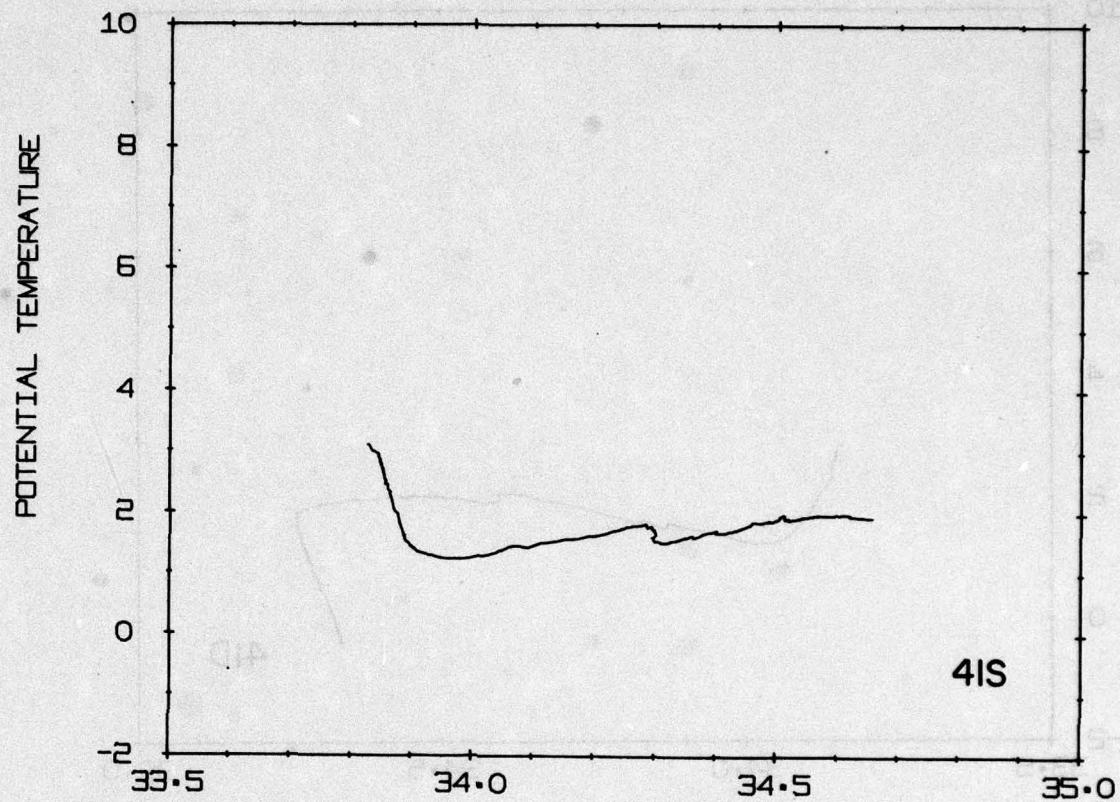
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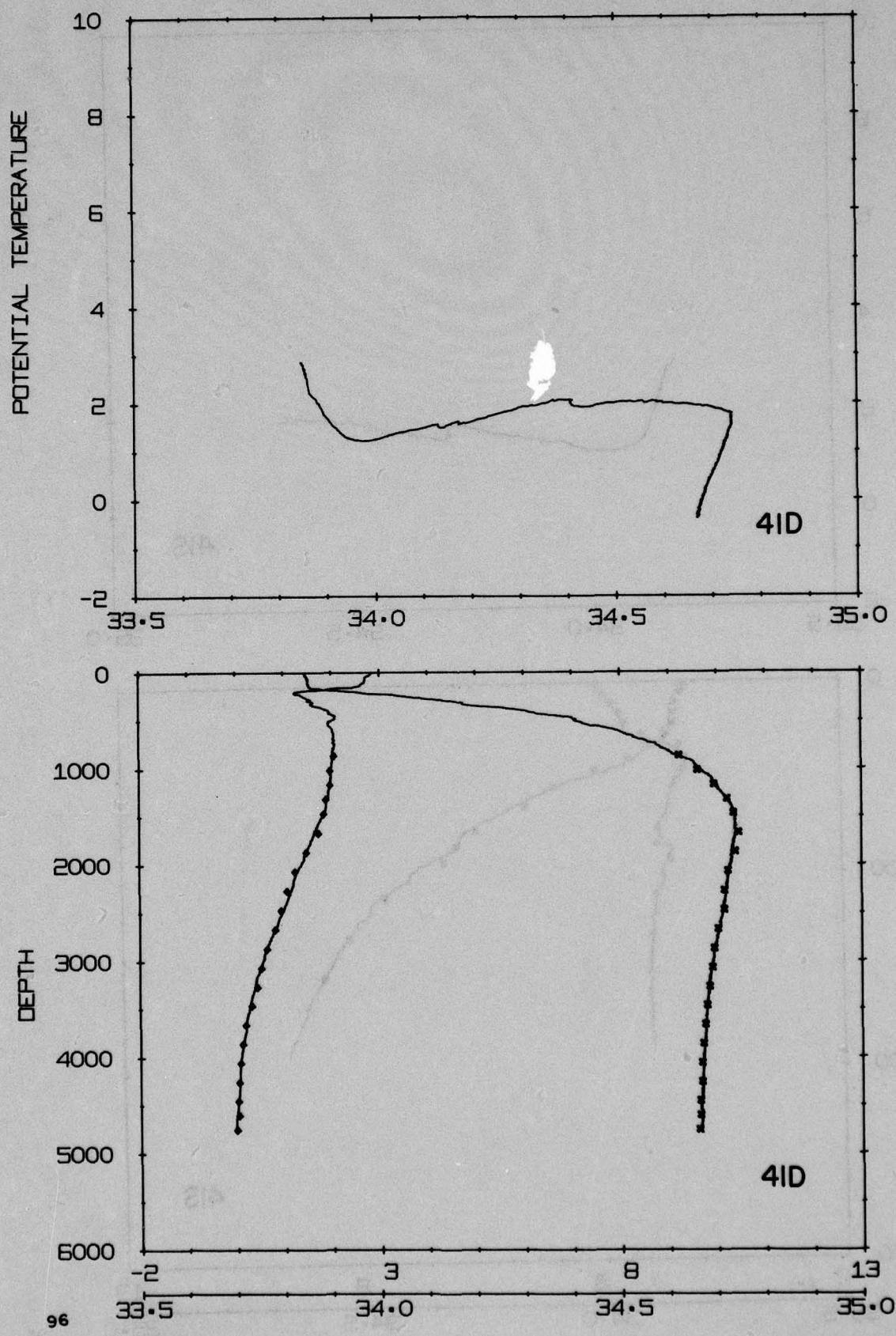


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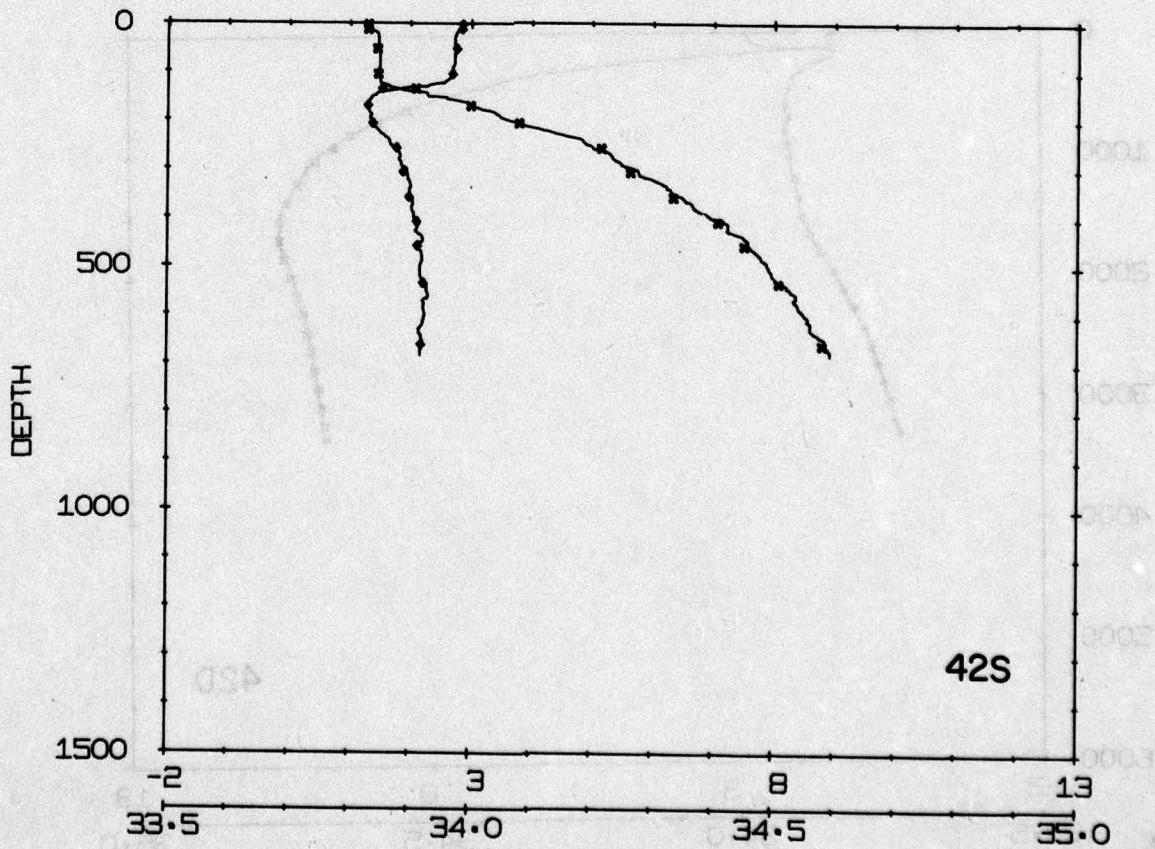
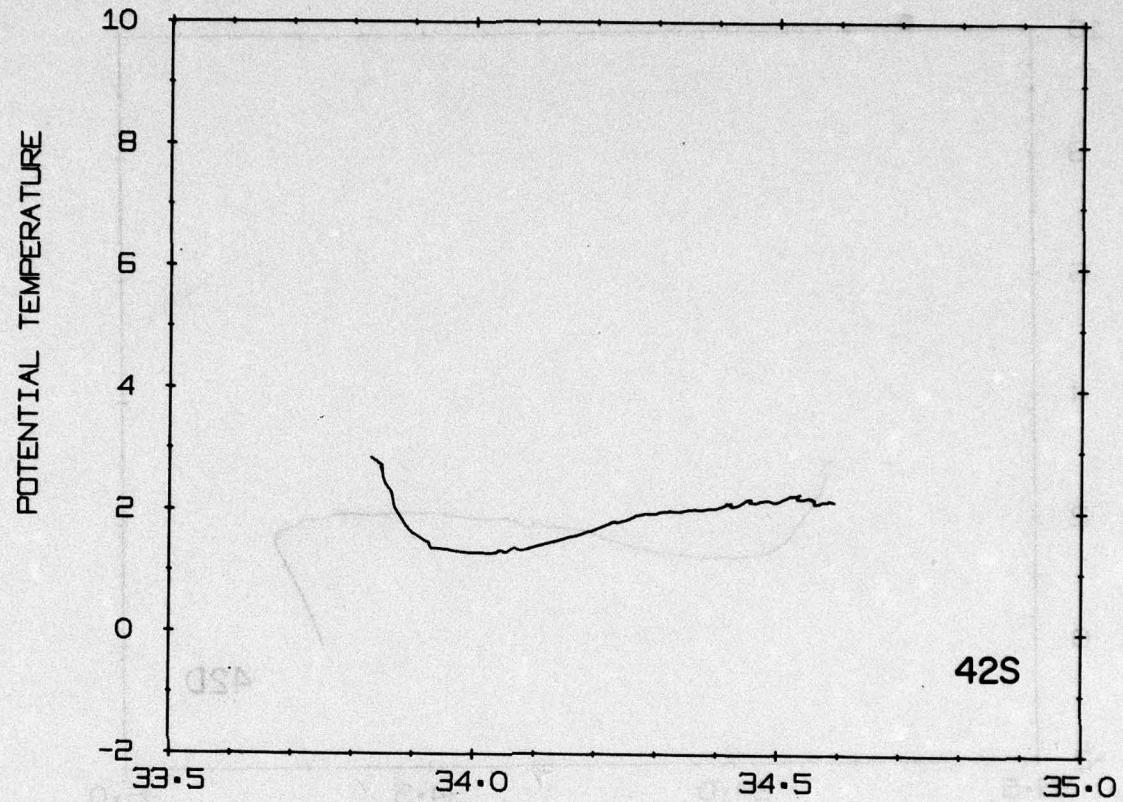
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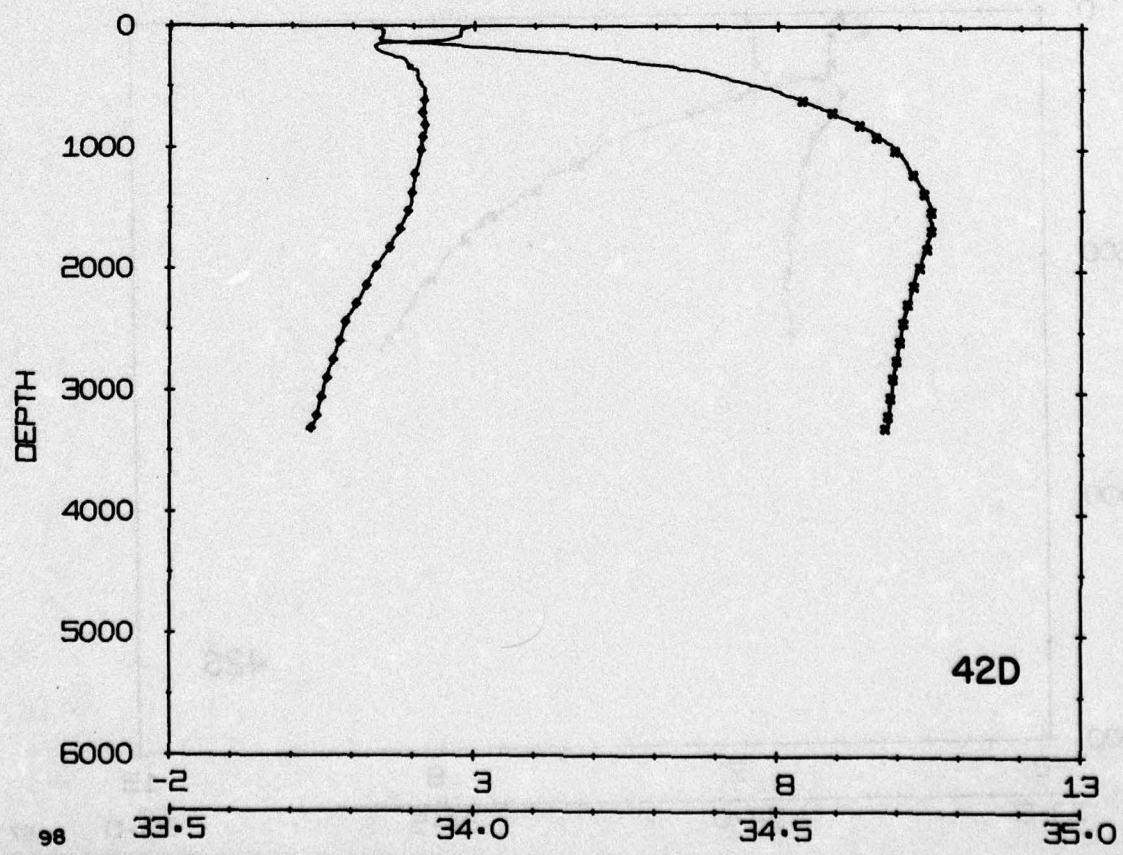
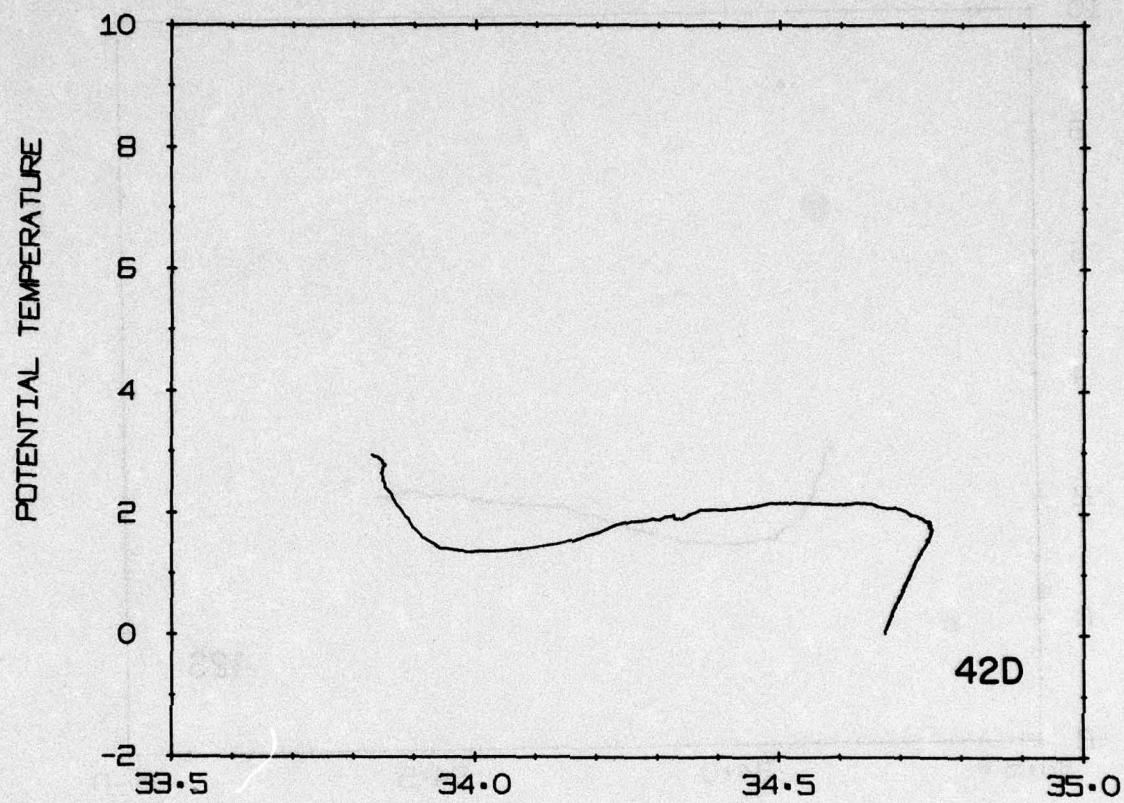
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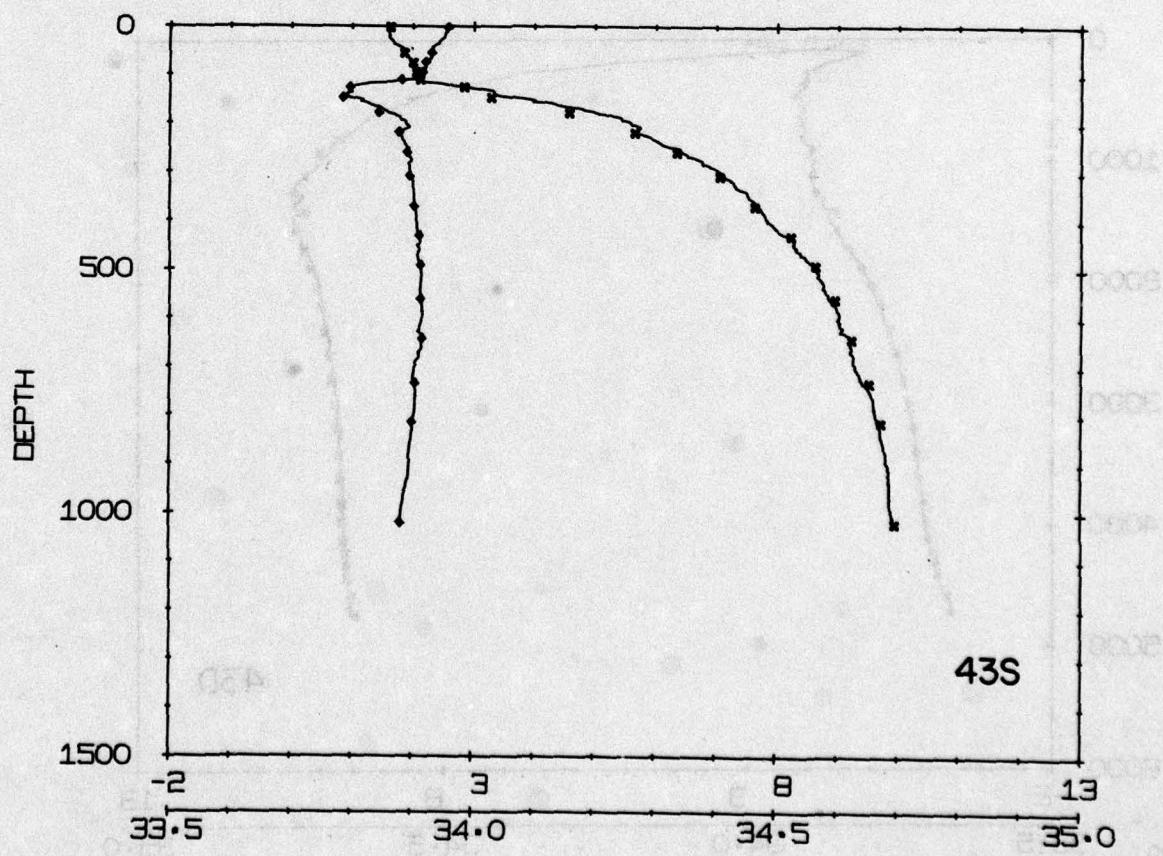
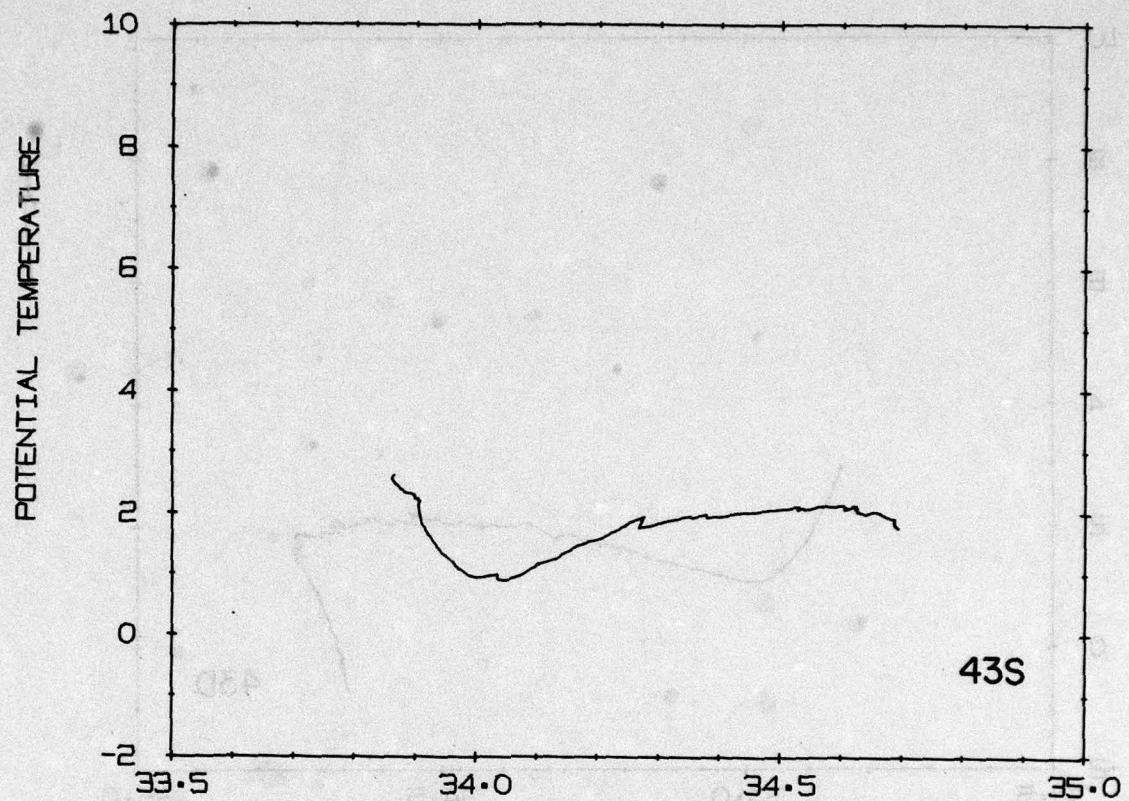
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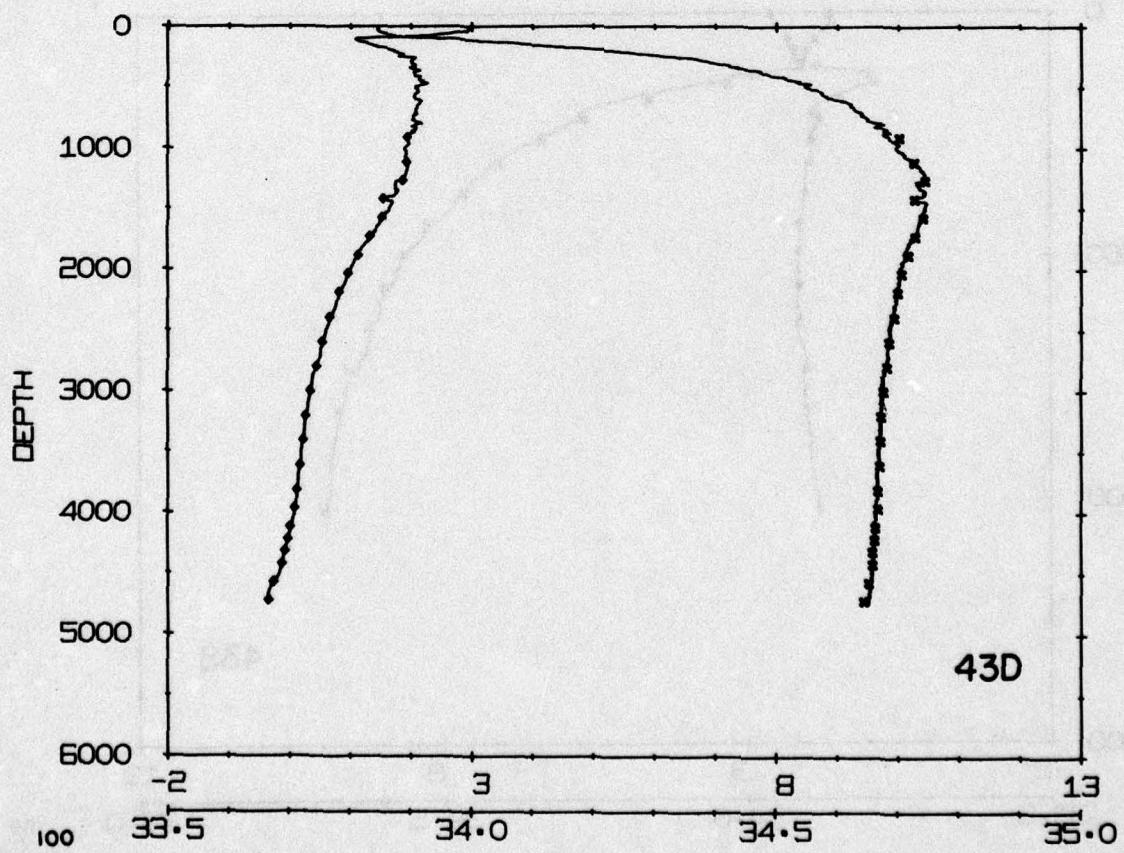
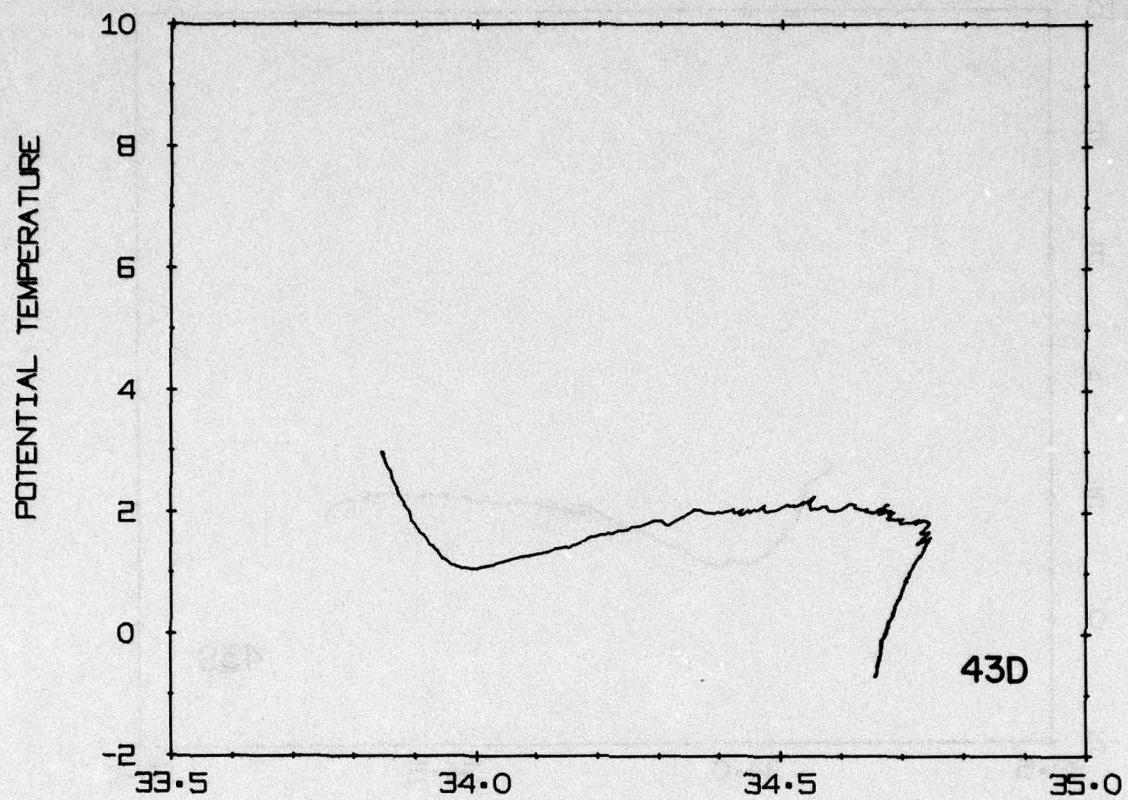
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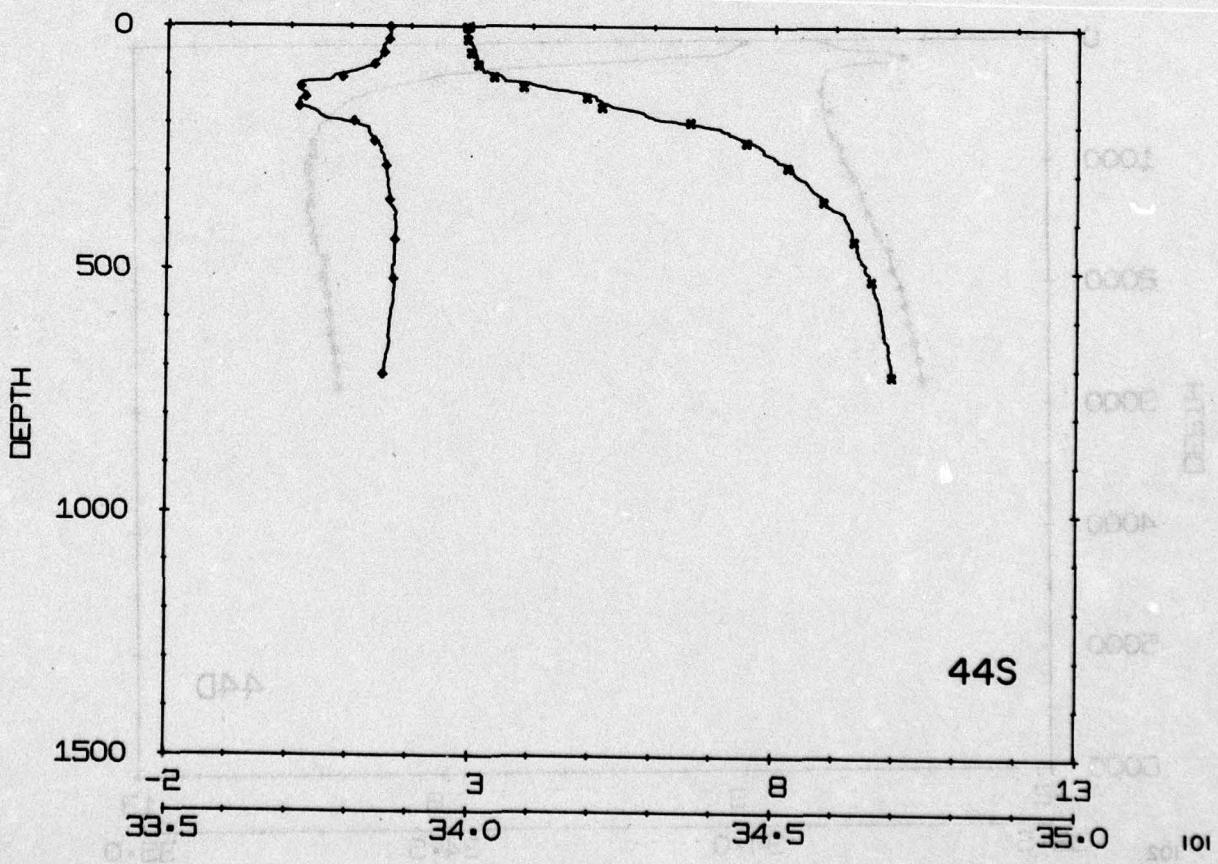
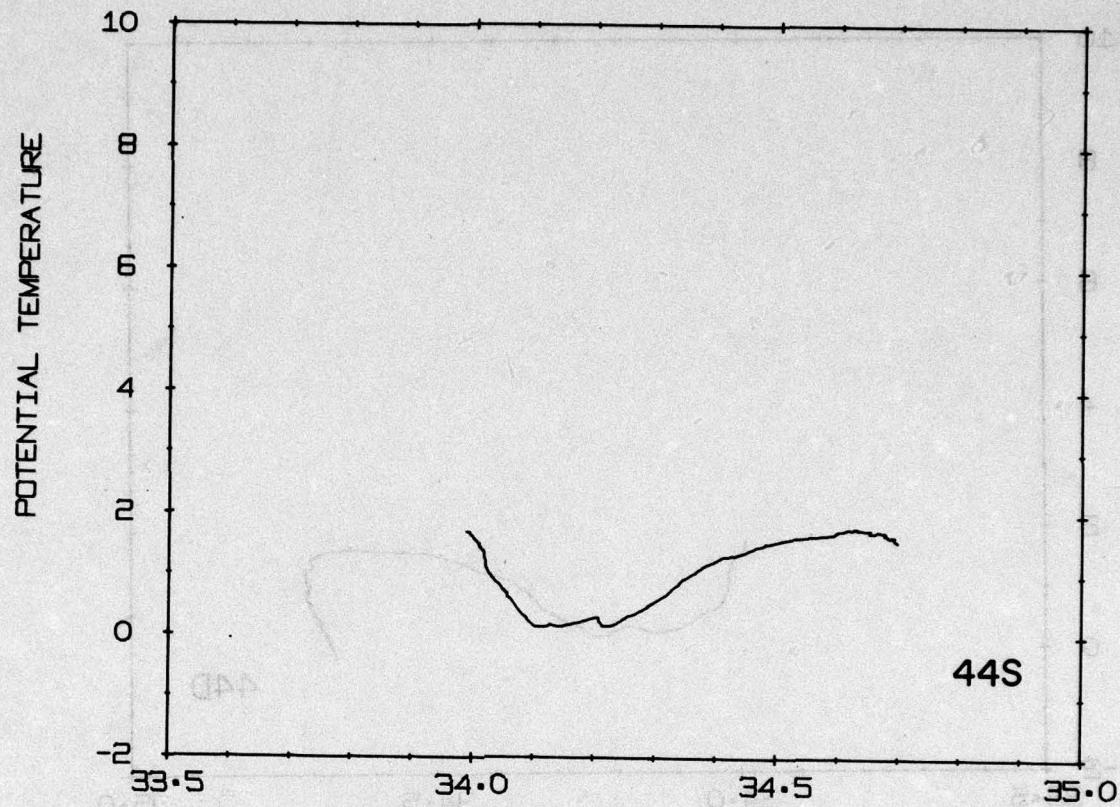
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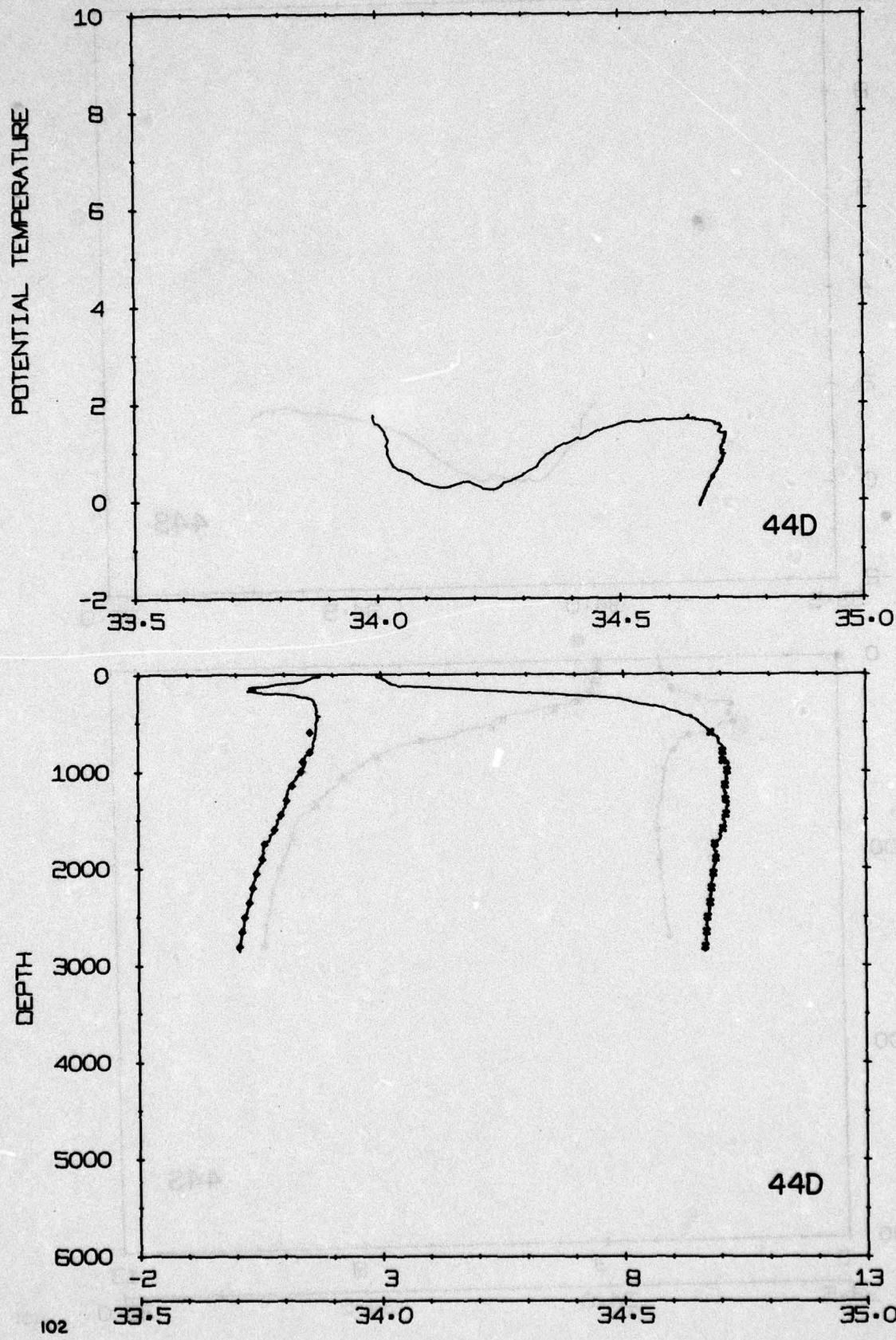
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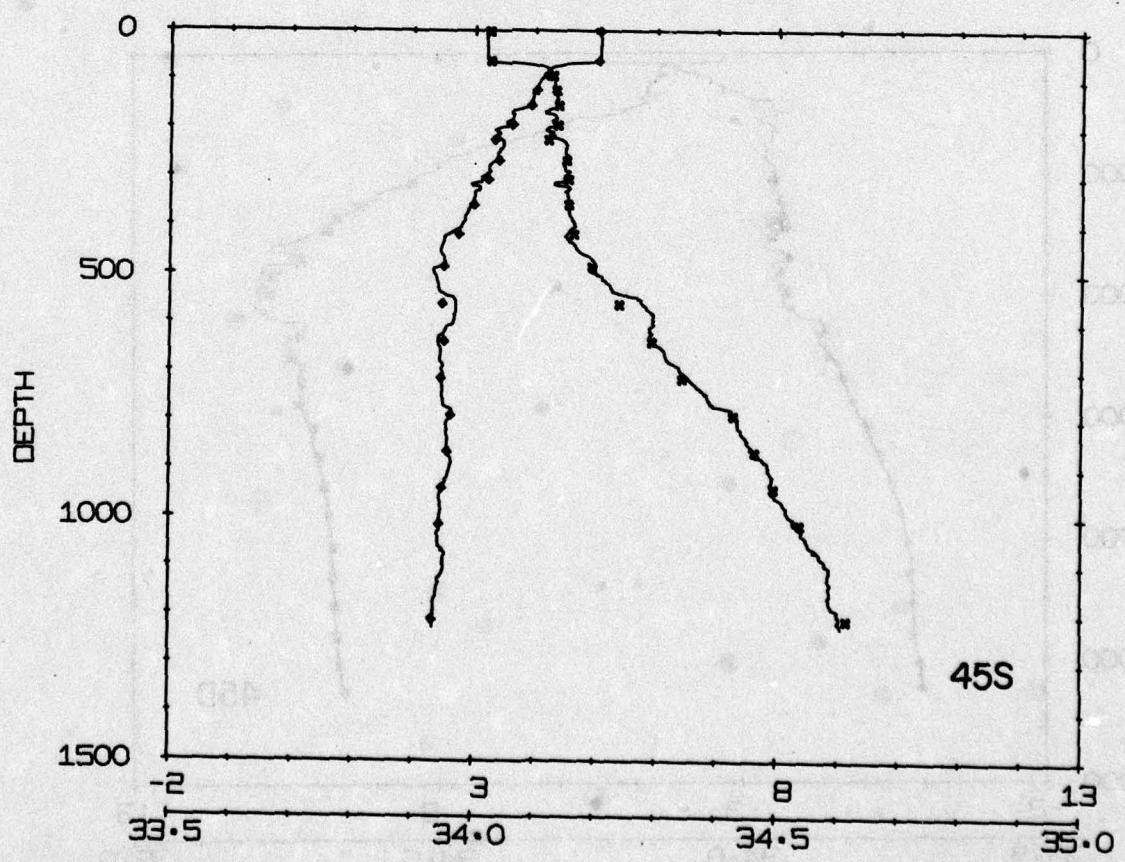
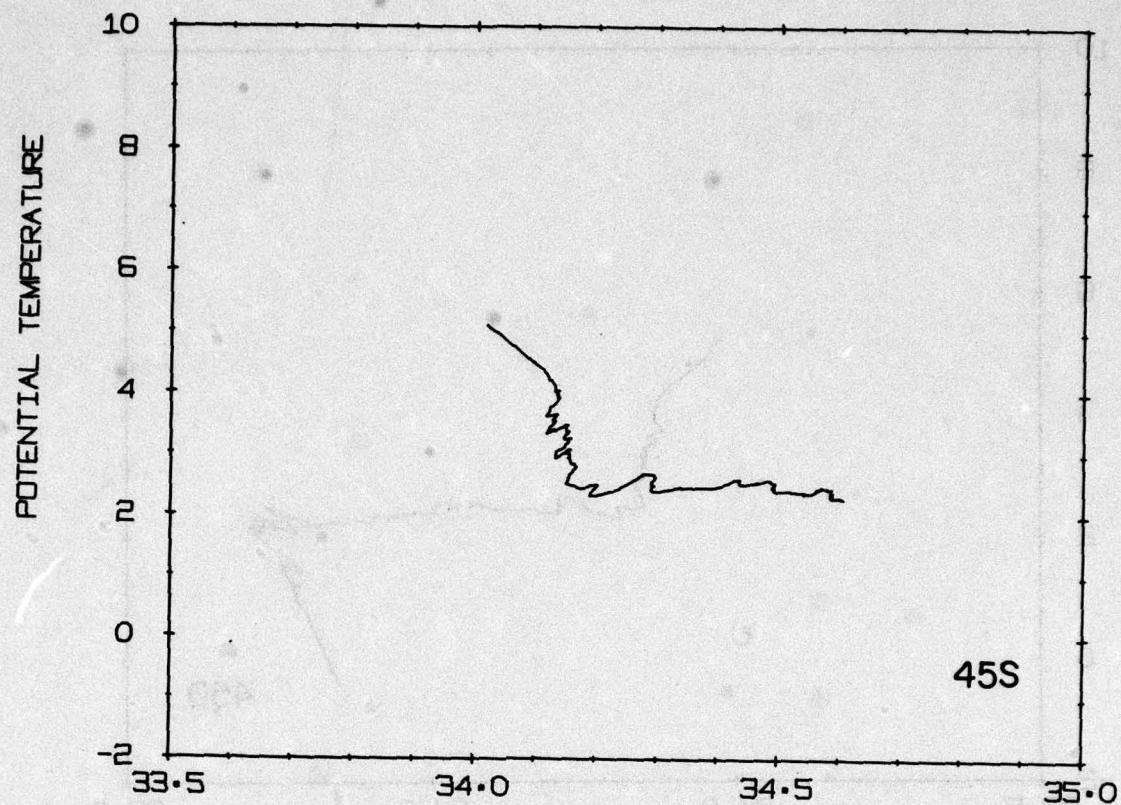
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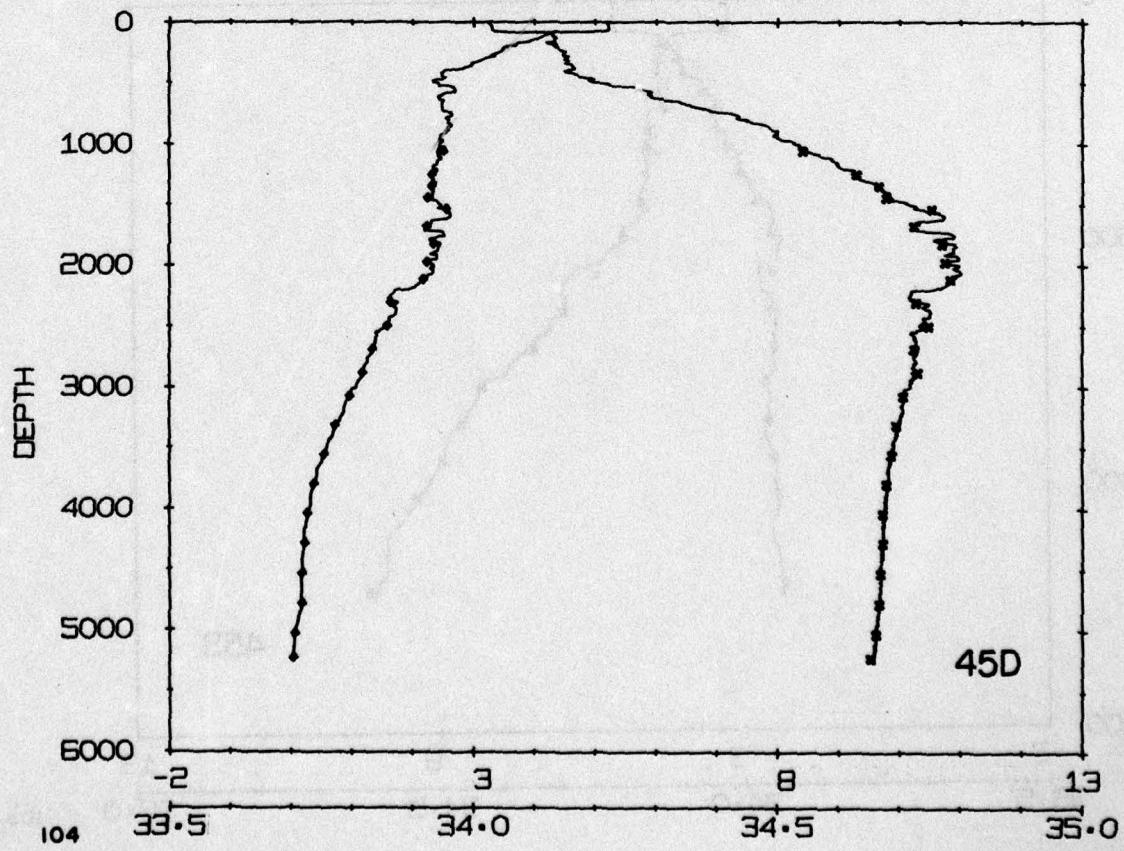
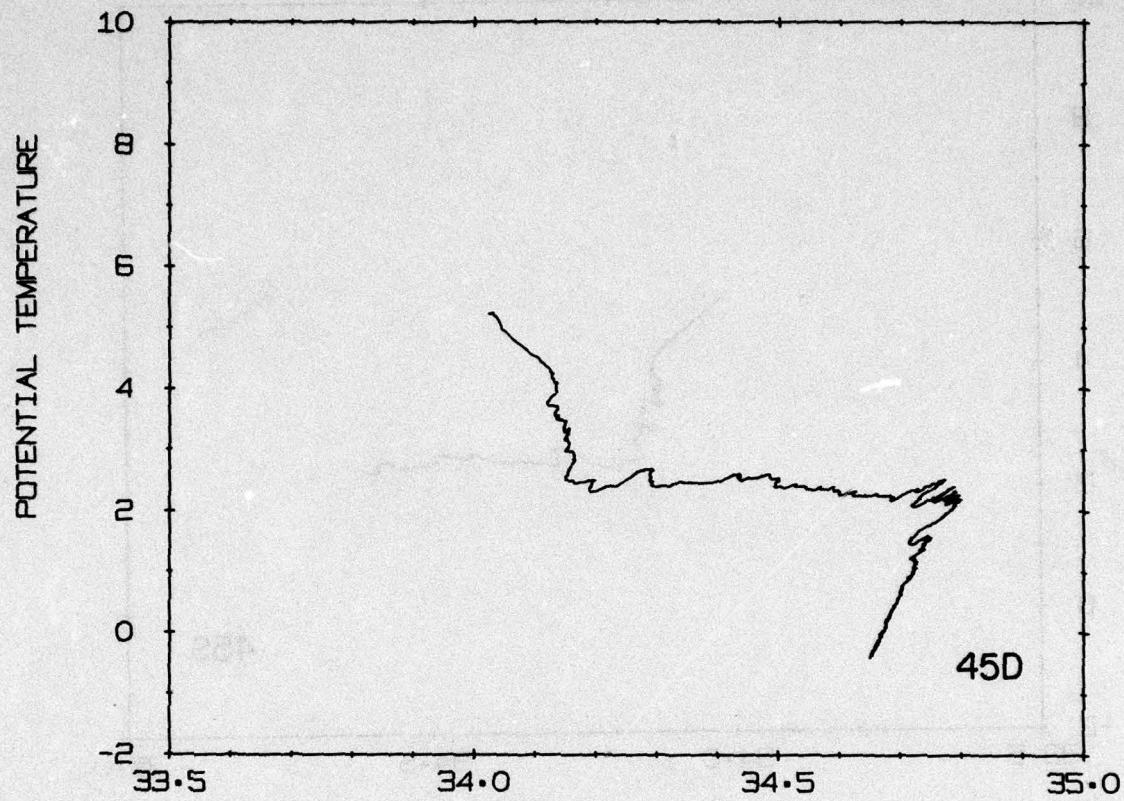
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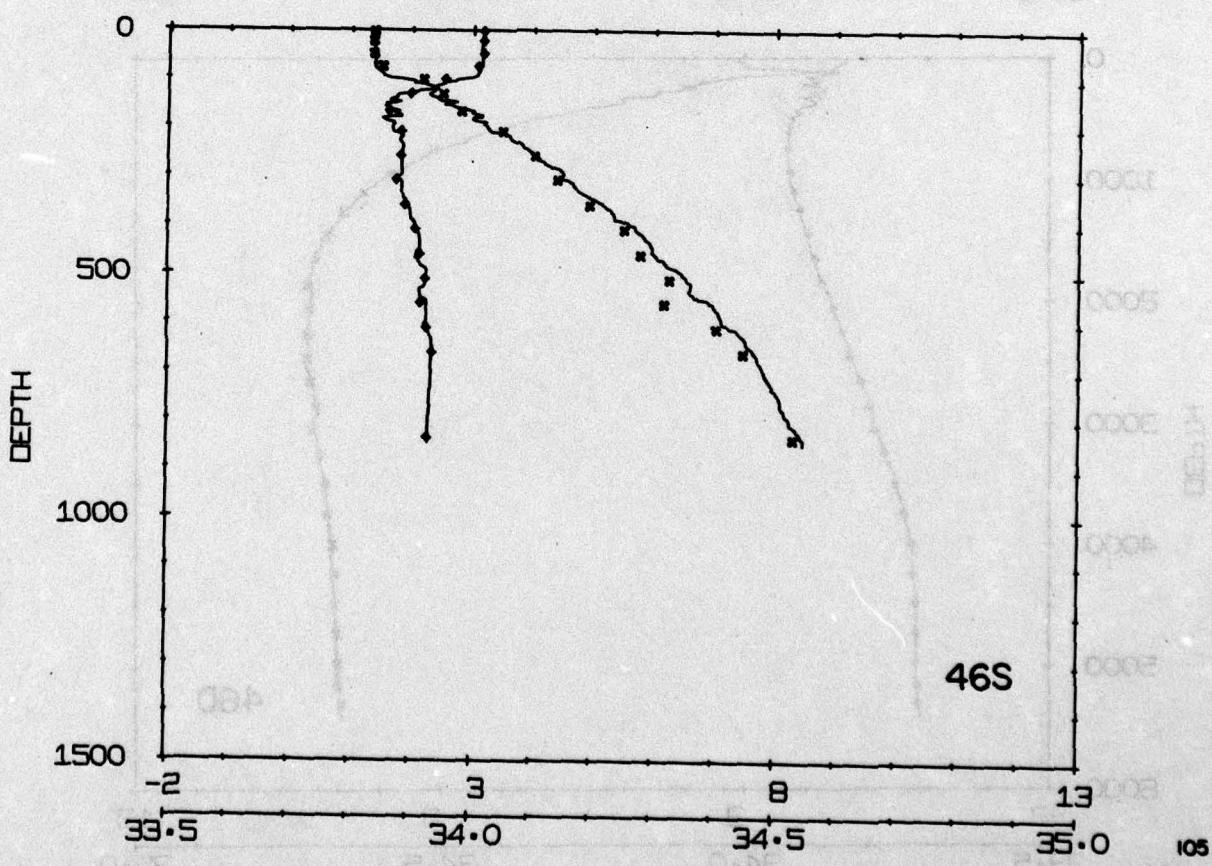
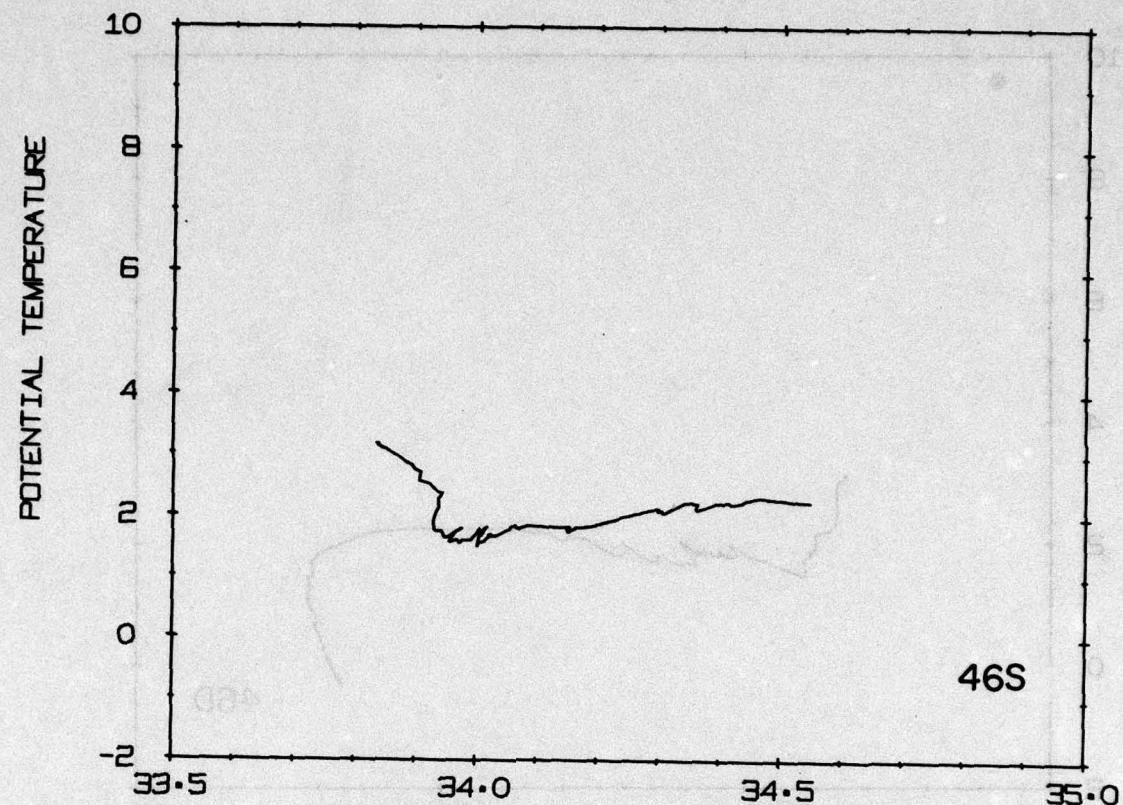
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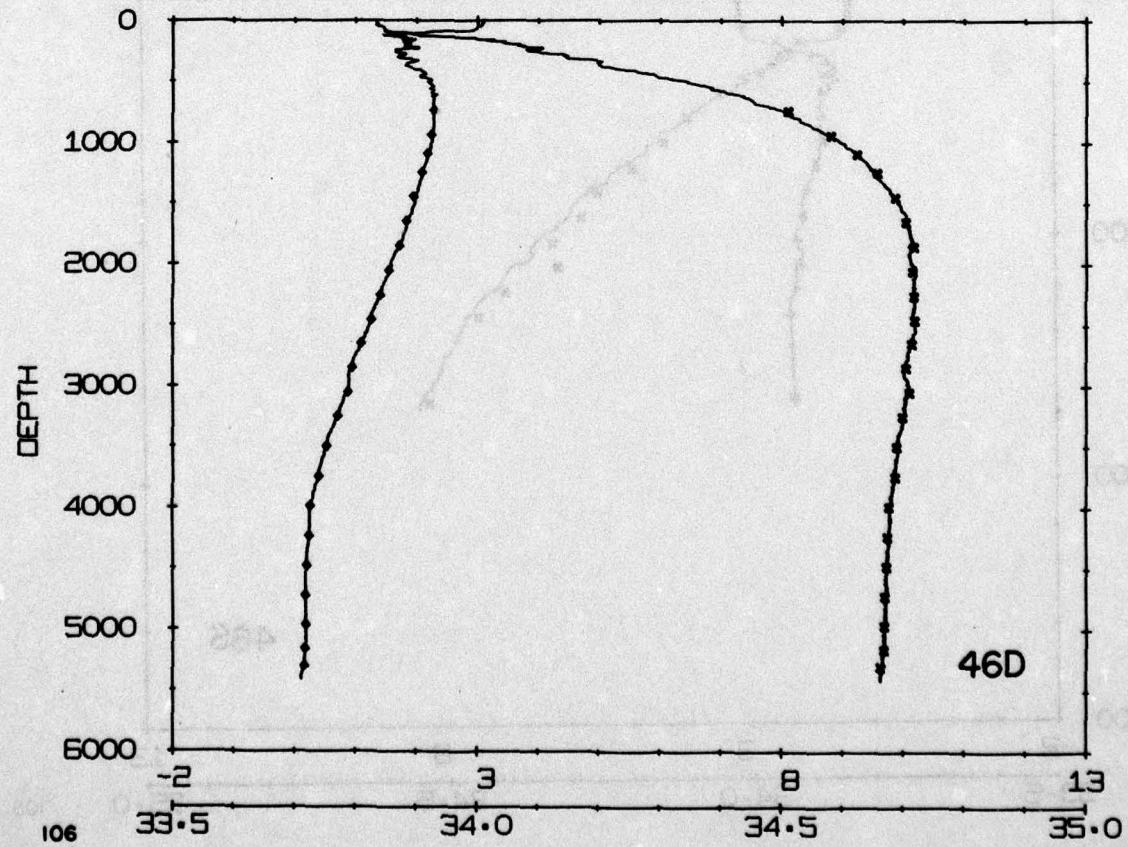
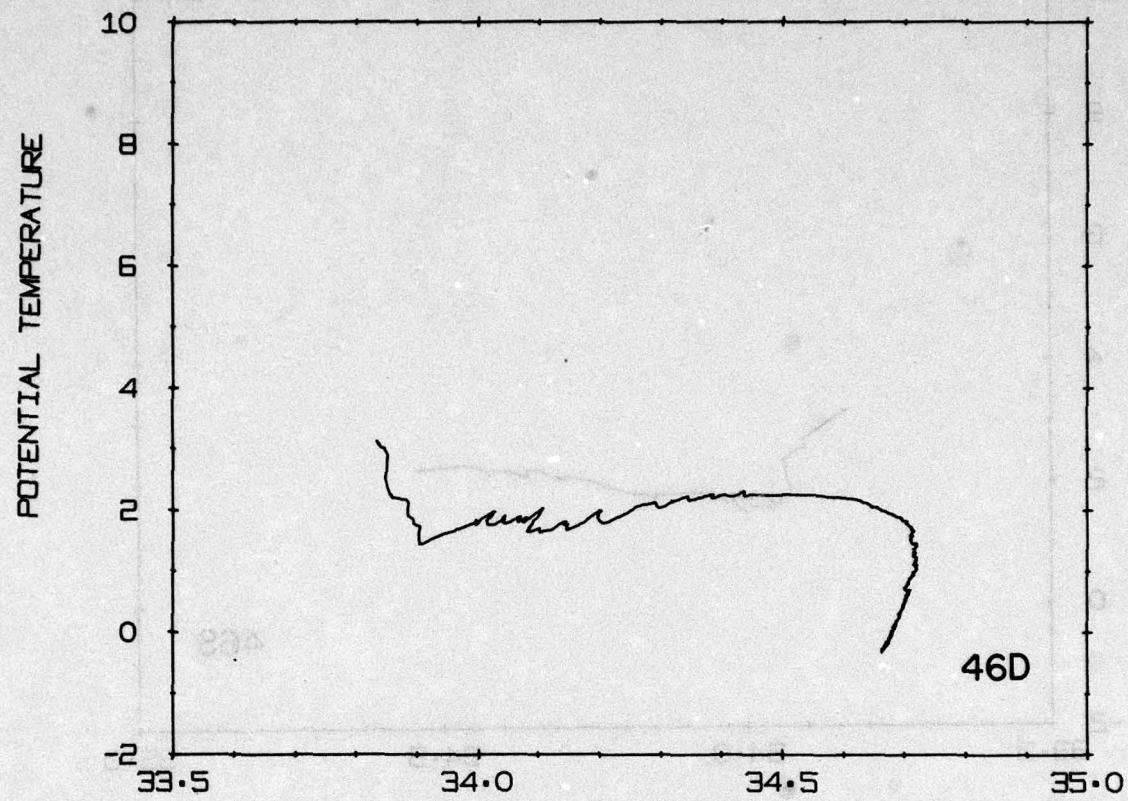
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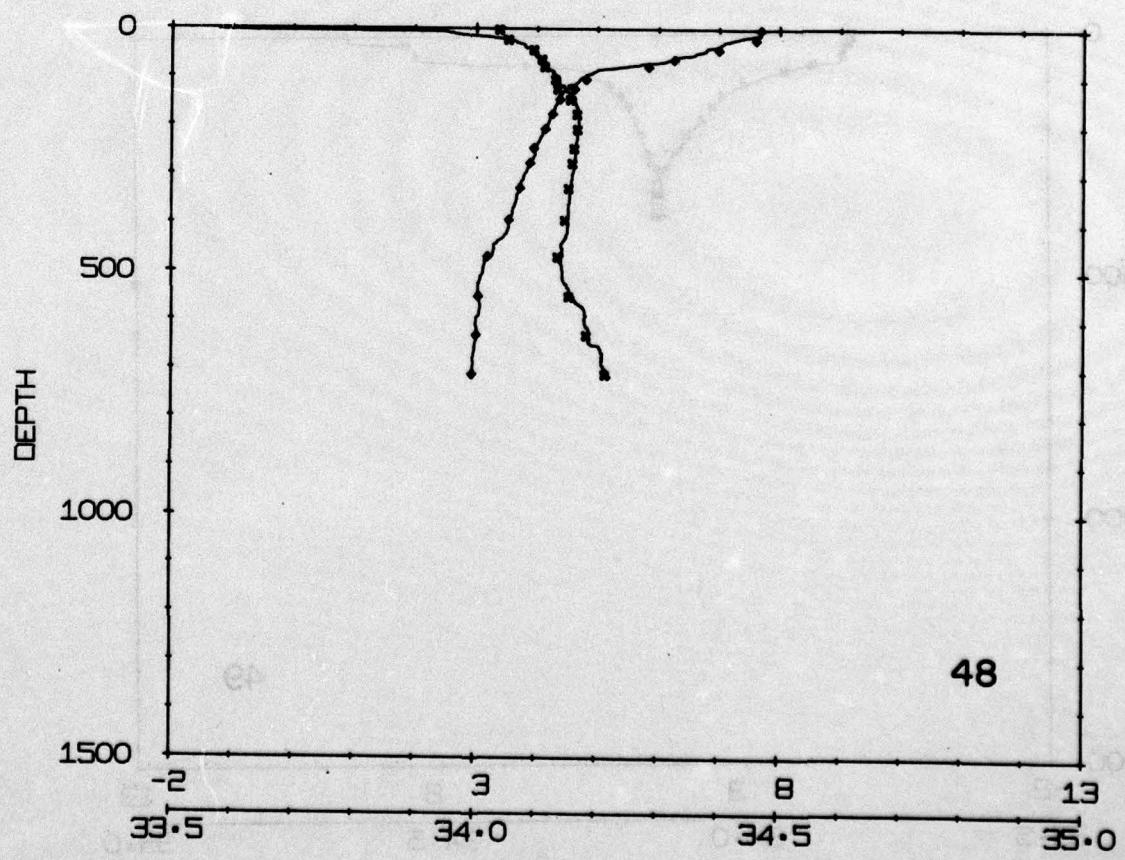
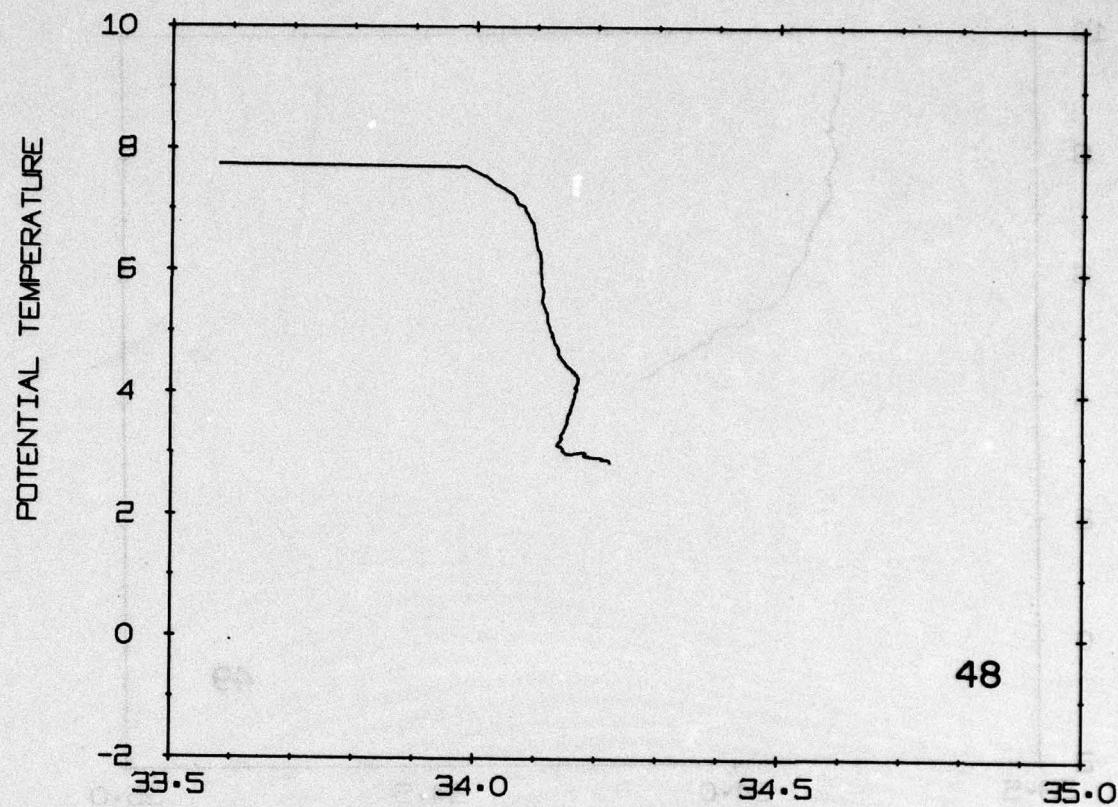
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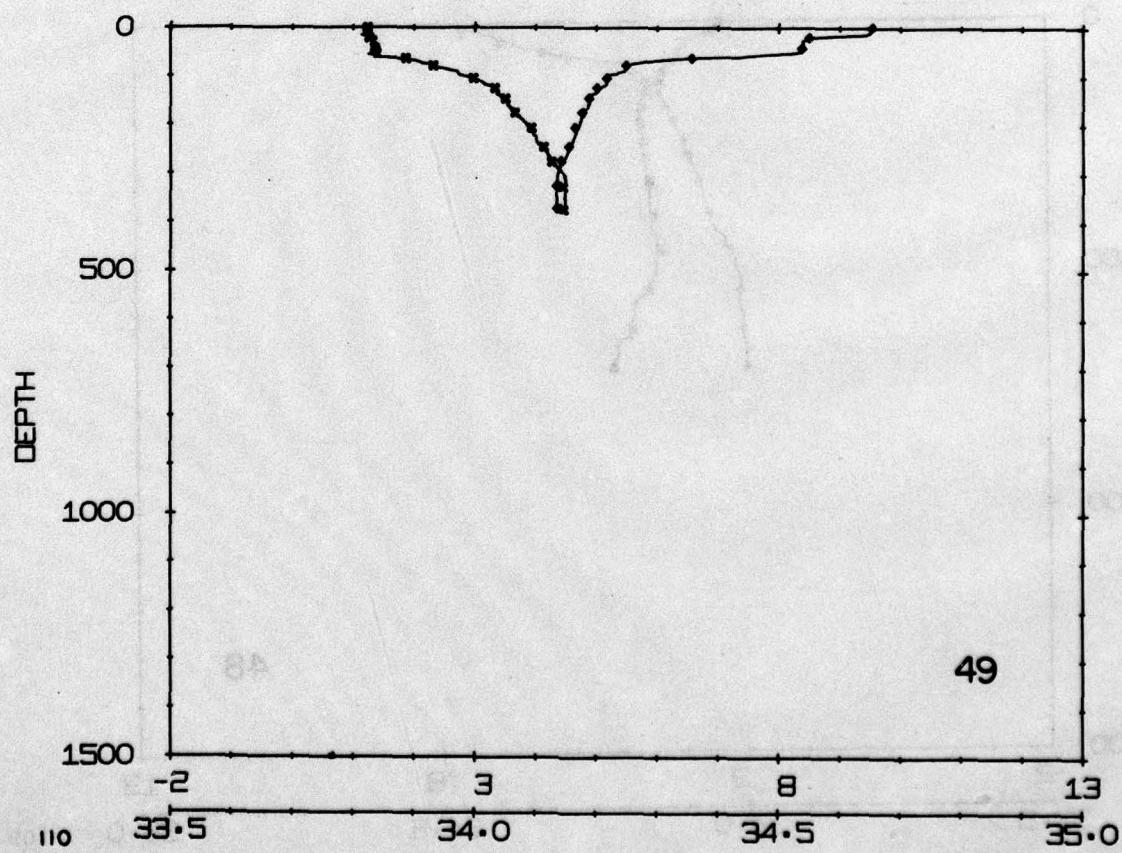
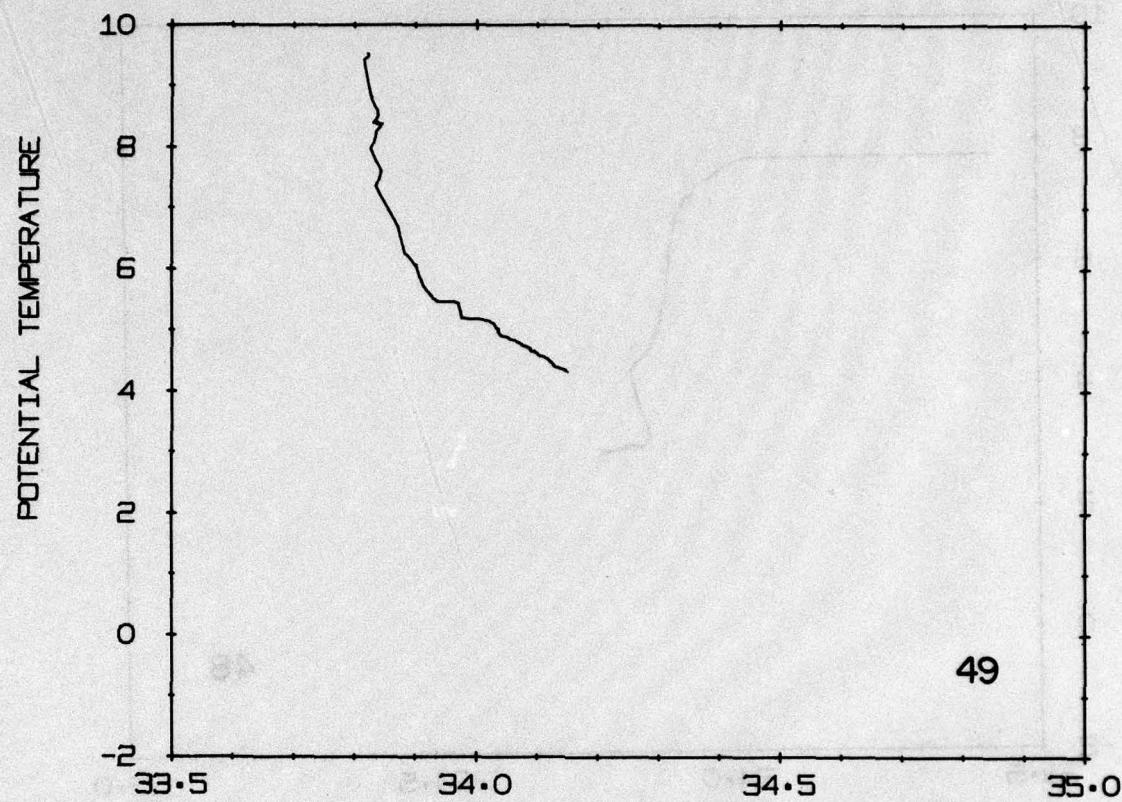
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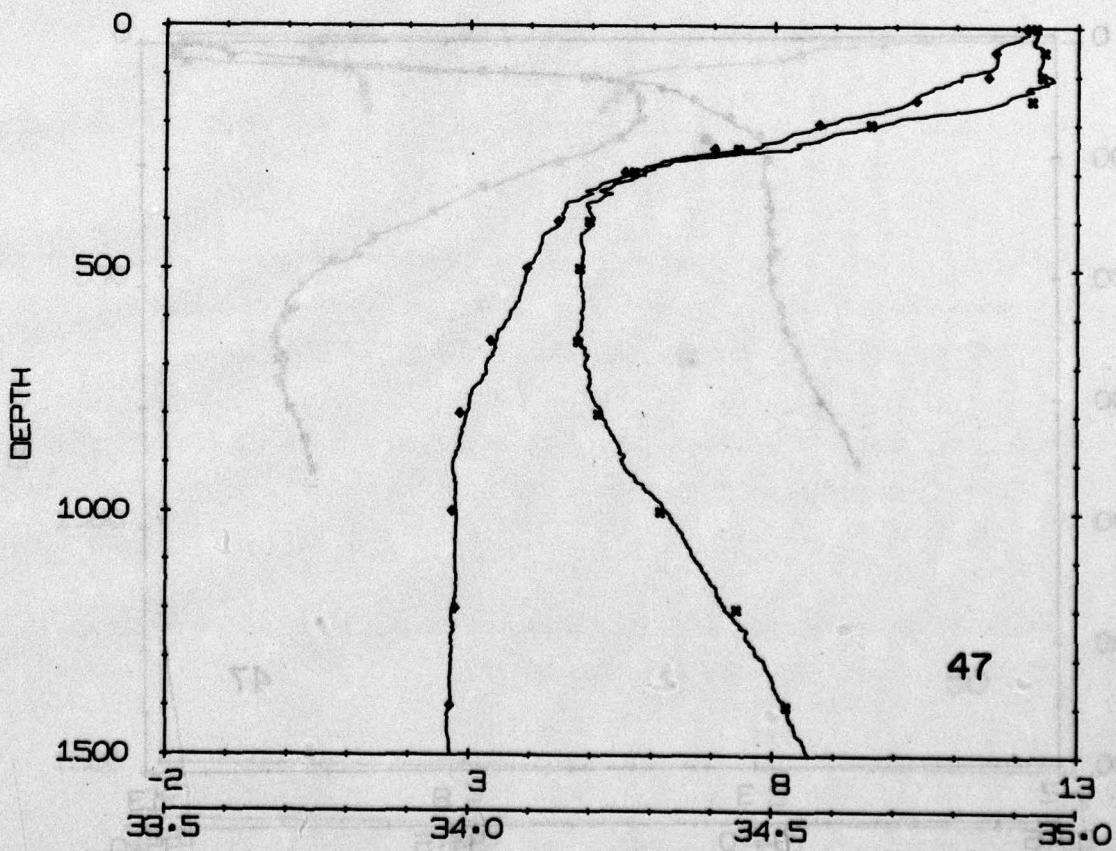
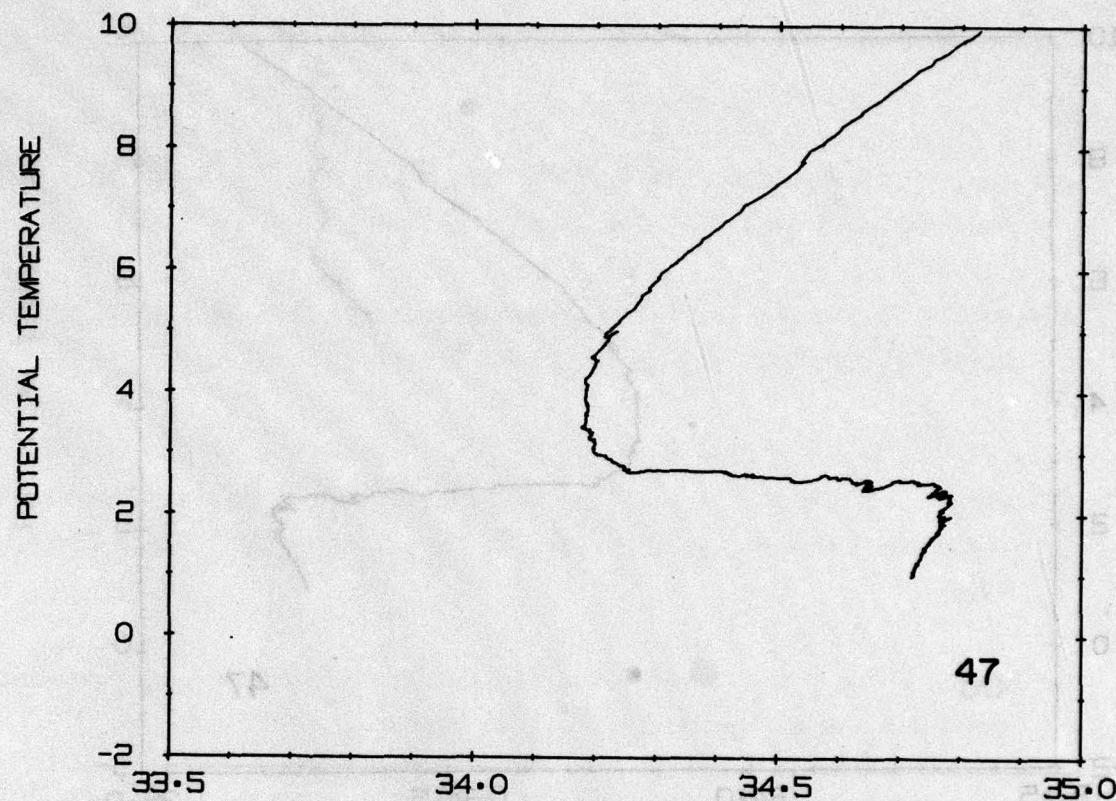
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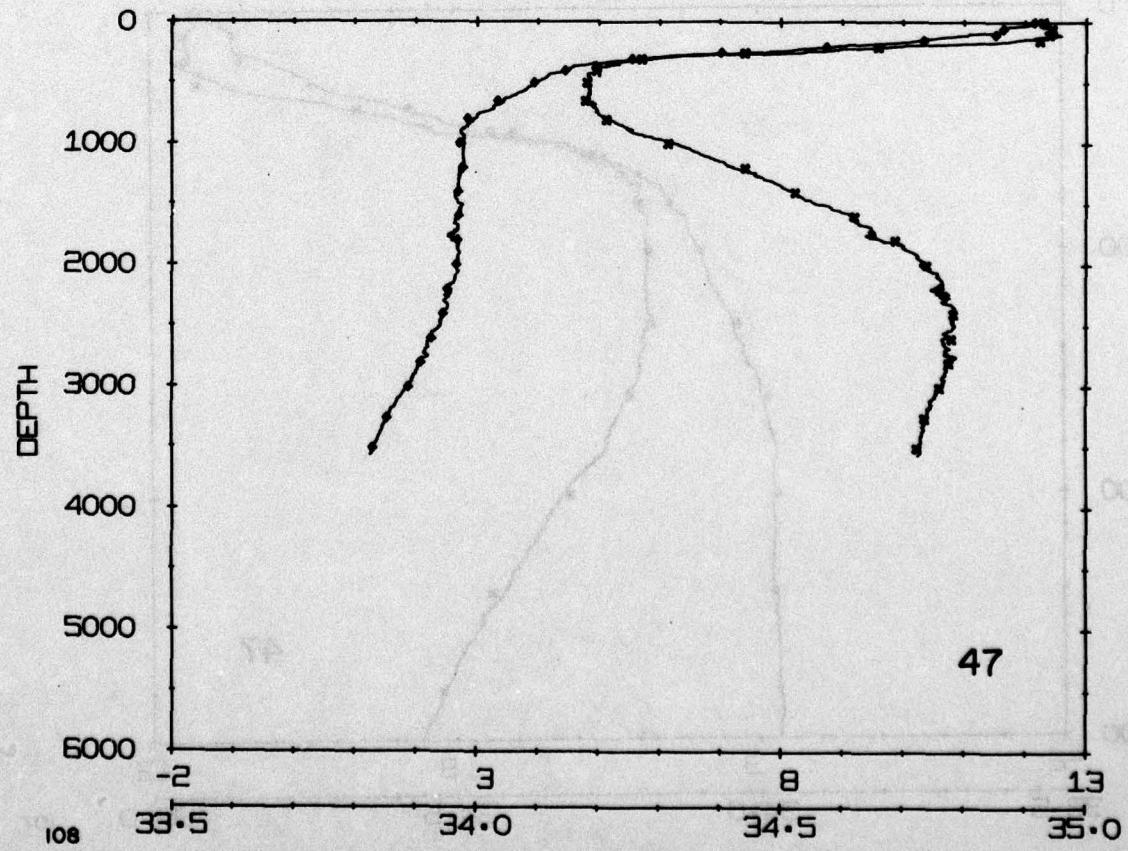
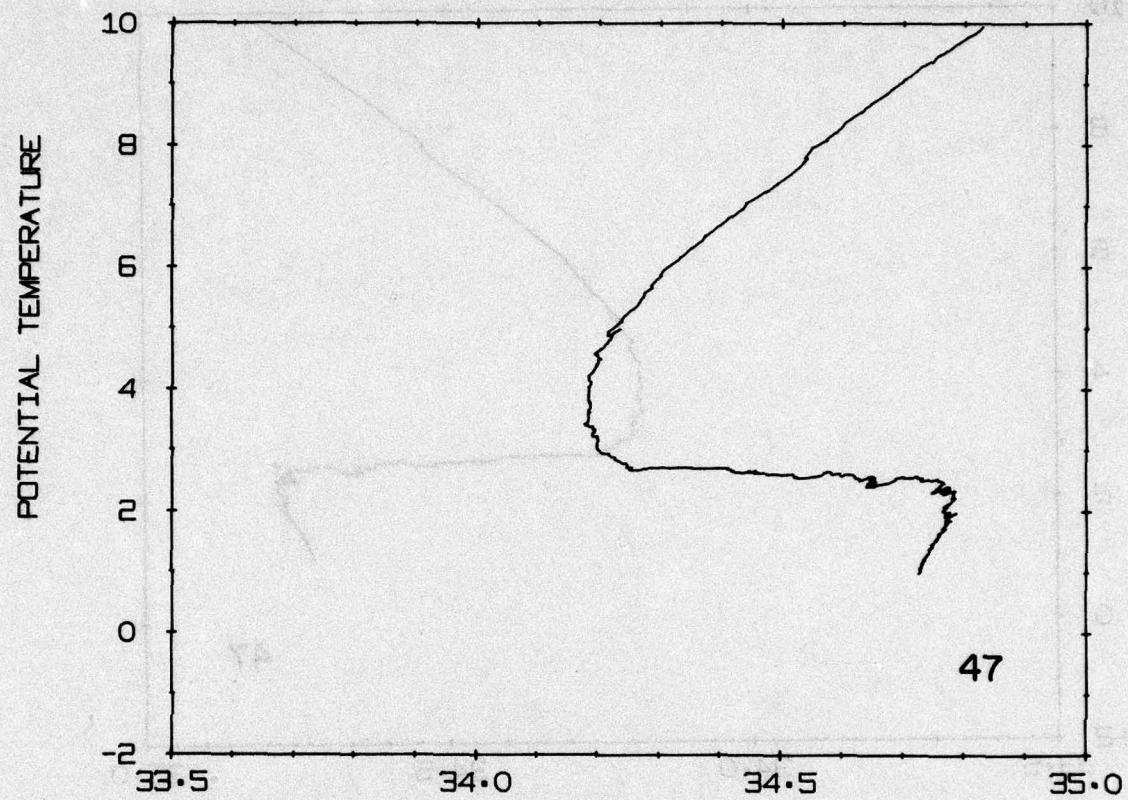
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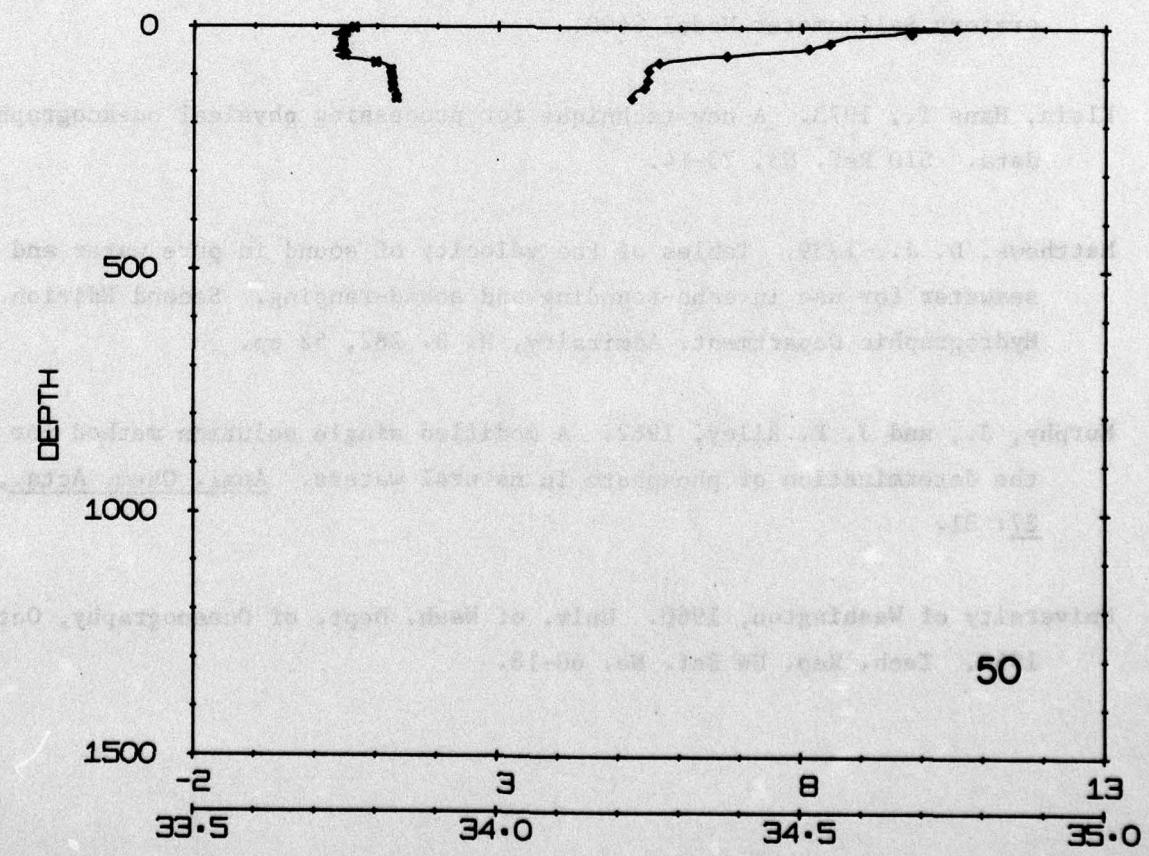
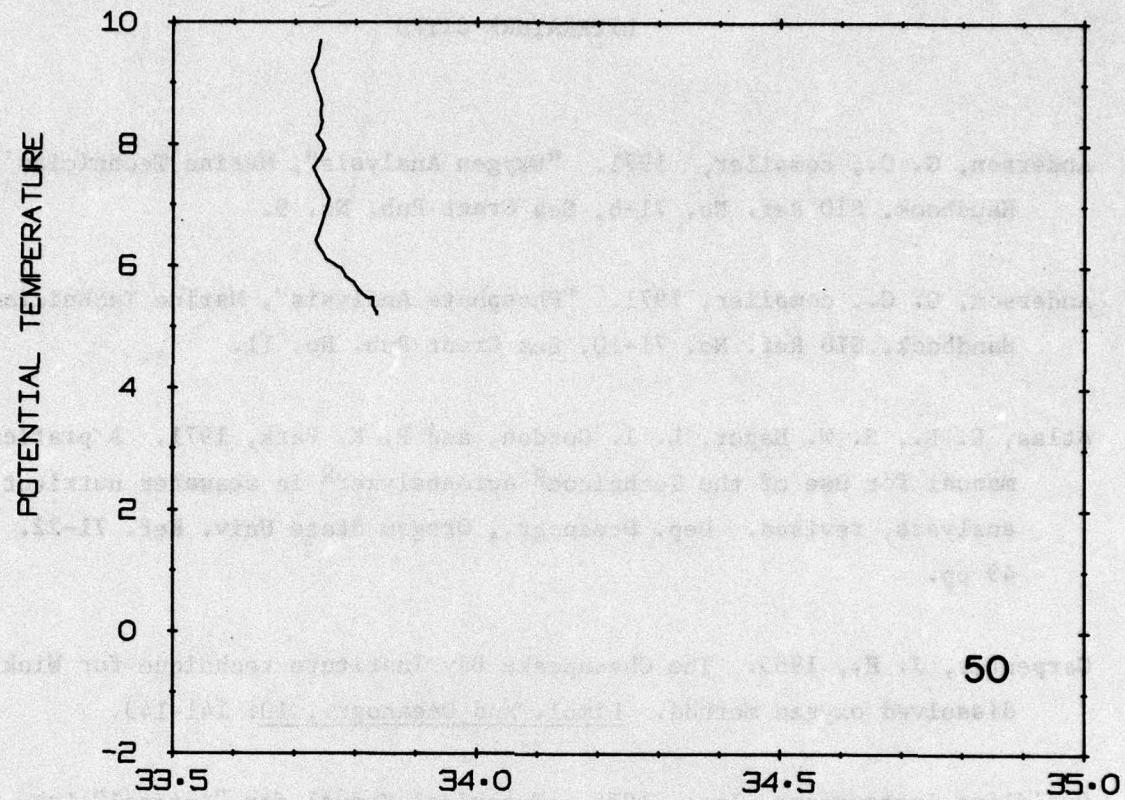
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